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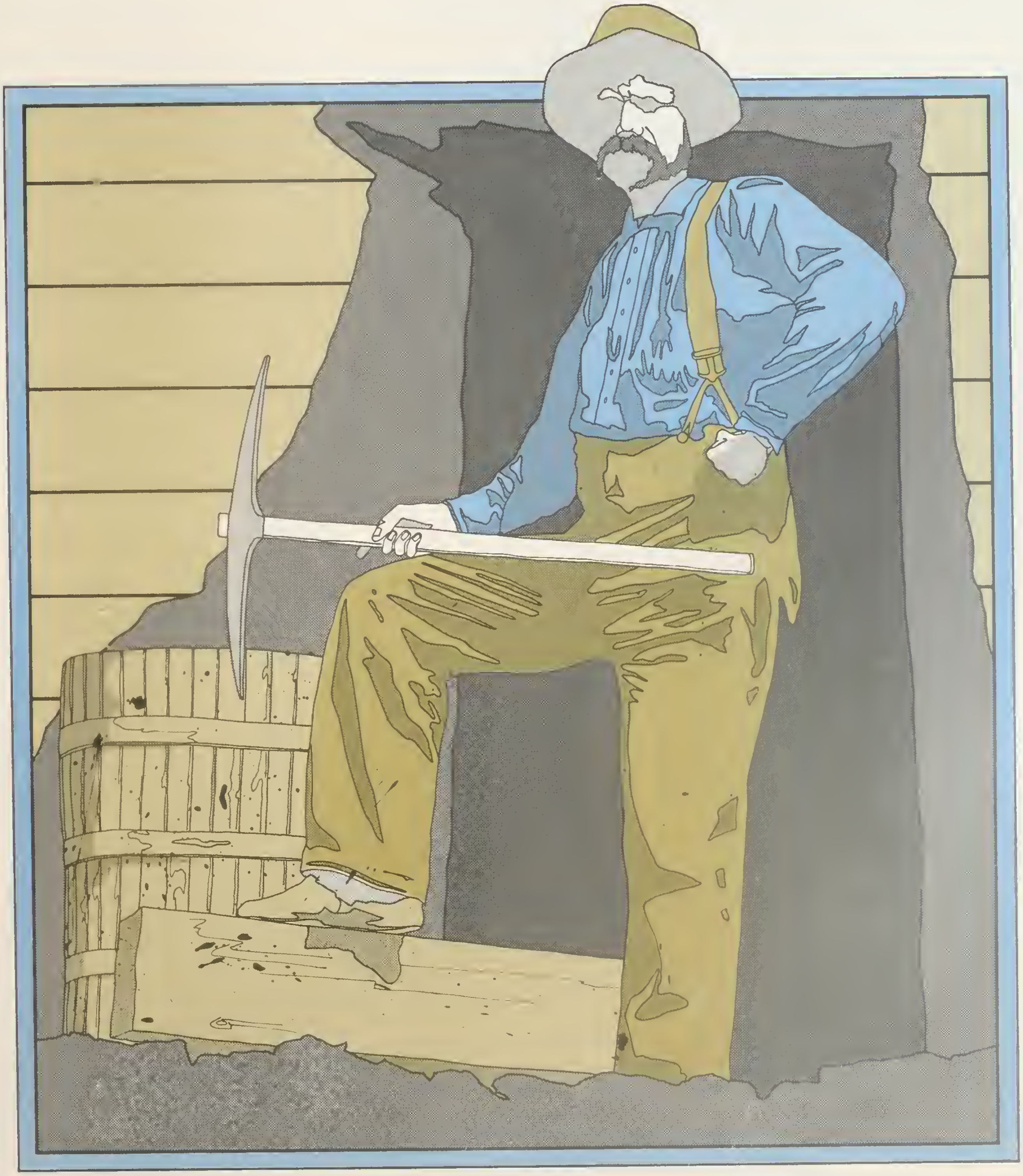
Robert Peccia &
Associates
Golden Messenger
Mine, York Mining
District

Golden Messenger Mine
Final Report

DSL AMRB 91-002
Project Location; York, Montana, T11N, R1W,
25 Miles Northeast of Helena



February, 1992
prepared by
Robert Peccia & Associates, Helena, Montana

FINAL REPORT

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GOLDEN MESSENGER MINE

York Mining District
Department of State Lands
Abandoned Mine Reclamation Bureau
Project Number 91-002

Location
York, Montana
Sec. 4, 9, Township 11 North, Range 1 West
Approximately 25 Miles Northeast of Helena
In Lewis & Clark County, Southwest Montana

February 1992

PLEASE RETURN

Robert Peccia & Associates
Helena, MT

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1.0 INTRODUCTION

1.1 Project/Site Description

The Golden Messenger Mine is located in Browns Gulch, a tributary of Trout Creek, near York, Lewis and Clark County, Montana in the S½ Section 4 and N½ Section 9, Township 11 North, Range 1 West (Latitude 46°40′, Longitude 111°45′). The area is characterized by steep, sparsely vegetated slopes in ephemeral drainages. Vegetation consists of Douglas fir, lodgepole pine, and ponderosa pine with understories of juniper, rough fescue and bluebunch wheatgrass. The geology of the area is dominated by the Algonkian Belt series of steeply dipping shaly, slaty, calcareous rocks. The Golden Messenger mine developed two major ore veins in quartz diorite dike intrusions and several smaller ore veins composed of quartz and ankerites.

The York area has been called one of the three most important of Montana's mining districts. Gold was discovered in York Gulch in 1866 and placer mining occurred there until about 1874. Mining at the Golden Messenger site began around the late 1890's. The original cyanide treatment plant was built at the site in the early 1900's. In 1913, a cyanide mill with a 50-ton ore bin was built on the site by the York Mining Company and powered by a plant located on Trout Creek. Some of the facilities of the power plant still exist along Trout Creek. The mine was idle from 1929 through 1933 and re-opened in 1934 when the mill capacity was expanded to a 100 ton ore bin. During this period approximately 125 tons of ore were milled per day. It was in full operation until it shut down permanently in 1942. A large quantity of the ore was treated by cyanide process during this period.

The primary targets for reclamation were the Golden Messenger mill building, two adits located north of the mill and two tailings ponds south of the mill. After a cultural resources investigation was completed by GCM Services and reviewed by AMRB and the State Historic Preservation Organization, the mill building was deemed to be unsound and beyond restoration and to present a substantial safety hazard. The site landowners considered the mill a liability due to the frequent public trespass and exploration of the mill building. The two adits were considered by the Department to be hazardous mine openings requiring closure.

Because the milling process was cyanidation, mine soils, spoils piles and tailings were sampled. Results of sampling showed the project area to be relatively chemically benign. The mill tailings had a pH of between 8.0 and 8.1 and slightly elevated levels of potassium, sulfate, copper, iron, manganese and zinc. Soil and spoil analyses are reported in The York mining district Environmental Assessment (Abandoned Mine Reclamation Bureau, February, 1991). The tailings ponds, which totaled approximately 6 acres in area, posed a potential threat to surface water quality due to erosion. In addition, the dam faces were sloped at 2:1 which was considered a potential hazard. The tailings ponds were devoid of vegetation except for noxious weeds including leafy spurge, dalmatian toadflax, knapweed, and St. Johnswort.

1.2 Map Showing Mine Location

A map of the general vicinity is presented in Figure 1. Figure 2 shows the Golden Messenger mine. Record Drawings of the construction project are in Attachment E.

1.3 Project Objectives

The primary objective of the project was to reclaim the disturbances at the site resulting from past hardrock mining activities. Specifically addressed were Priorities 1, 2, and 3 of the Surface Mining Control and Reclamation Act, Title IV - Abandoned Mine Reclamation (Public Law 95-87). The priorities dictate the expenditure of moneys from the fund for the purposes of protecting public health, safety, general welfare and property from danger of adverse effects of mining practices and the restoration of land and water

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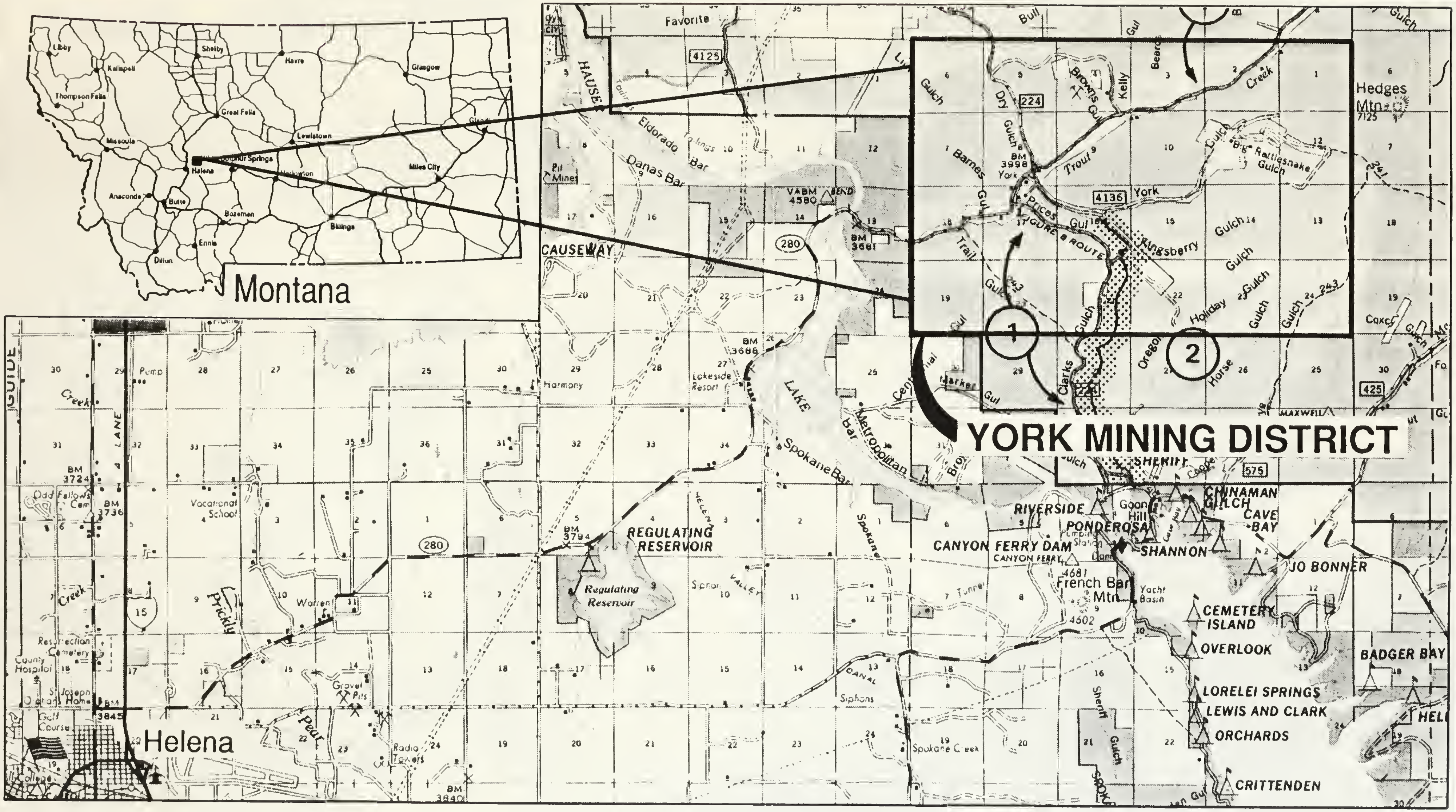
Messenger included grading and revegetating the tailings pond areas, closing two adits, constructing a drainage channel through the project area and dismantling the mill building. An additional project goal was to salvage historic artifacts from the mill building for the Montana Historical Society.



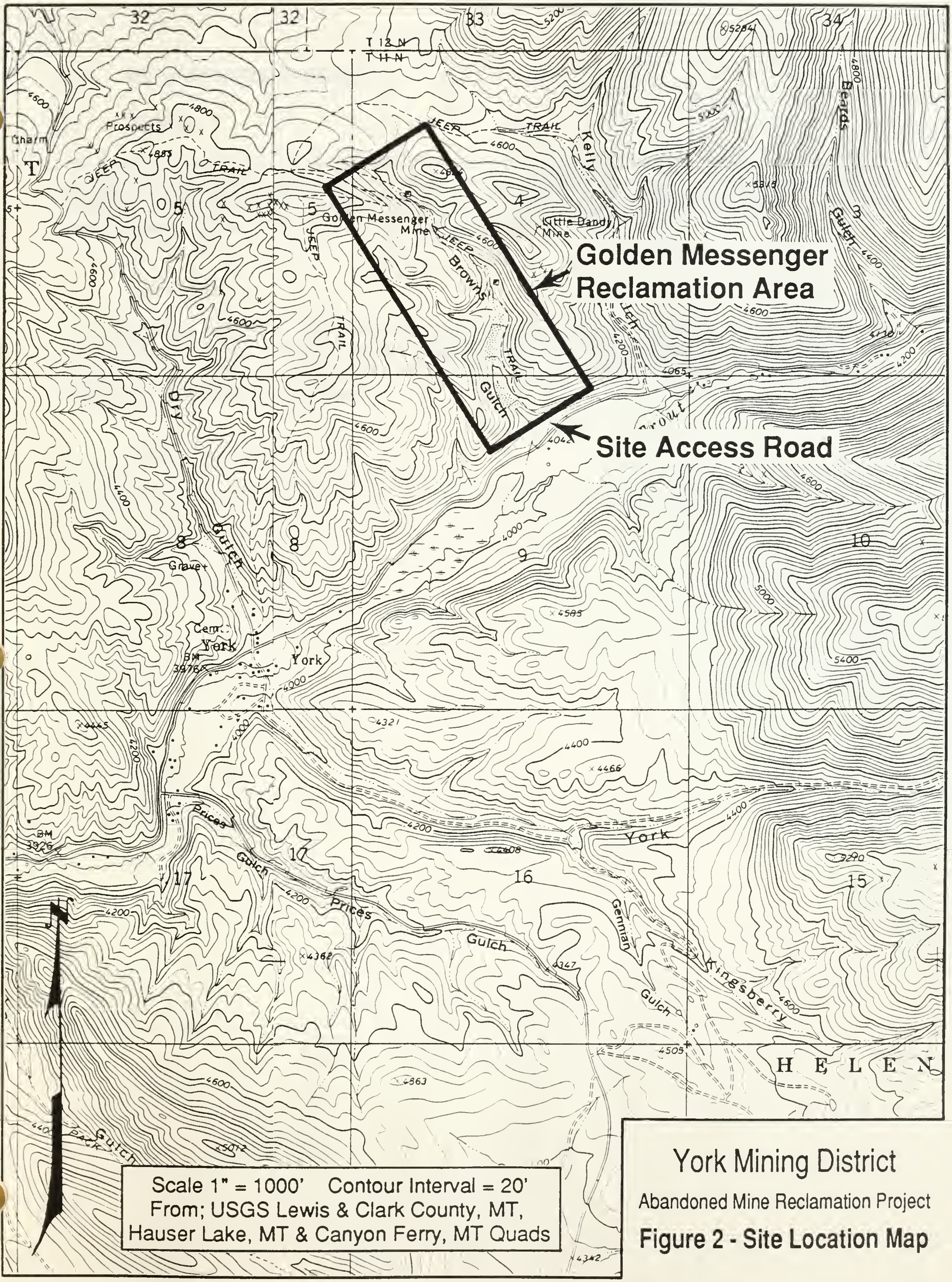
Approx. Scale

0 1 2 3 4 5 miles

This map is a segment of the Helena National Forest Plan, 1988
①② represent travel restriction areas.

York Mining District
Abandoned Mine Reclamation Project

Figure 1 - Vicinity Map



Scale 1" = 1000'   Contour Interval = 20'
From; USGS Lewis & Clark County, MT,
Hauser Lake, MT & Canyon Ferry, MT Quads

York Mining District

Abandoned Mine Reclamation Project

Figure 2 - Site Location Map

2.0 RESPONSIBLE PARTIES

2.1 Contractor

The general contractor for the project was Shumaker Trucking and Excavating Contractors, Inc, Havre Highway, P.O. Box 1442, Great Falls, MT 59403. The only subcontractor was A & S Fencing, 731 50th St. South, Great Falls, MT 59405. The project superintendent for Shumaker was Ken Carlstad and the project manager was Joe Aline. Joe Aline was also the supervisor for A & S Fencing.

2.2 Engineering

The engineer for the project was Robert Peccia & Associates (RPA), Helena, MT. The engineering services provided by RPA included preliminary and design engineering and construction management. The project manager for RPA was Robert Morton who also served as substitute observer. The construction observer for RPA was Nancy Granger.

2.3 AMRB Coordination

The Abandoned Mine Reclamation Bureau (AMRB) manager for the project was Dale Herbort.

3.0 DESCRIPTION OF RECLAMATION CONTRACT

3.1 Bidding and Pre-Construction Administration

The project was advertised in three newspapers by the AMRB prior to the bid opening on June 25, 1991. A pre-bid conference was held on June 14, 1991 at the Golden Messenger Mine site. The following individuals were in attendance:

Robert Morton, RPA
Nancy Granger, RPA
Dale Herbort, AMRB
Randy McDaniel, McDaniel and Sons
Mike Brusious, M & B Excavating
Russell Martin, M & B Excavating
Bill Sudan, Sudan, Inc.
John Baucus, Sieben Ranch Company
Ed Baxter, Baxter Construction
Dan Warwick, Sharbono Construction
John Mockie, Concrete Septic Tank Company
Wayne Allen, High Mountain Construction
Jon Grandy, G & N Enterprises
George Brocklehurst, Hallatt Reclamation Company
T. Sewell, Hallatt Reclamation Company
Randy Nesmith, Hallatt Reclamation Company
Gene Willison, affiliation unknown

A summary of the conference is included in Attachment A to this report.

The bid opening was conducted by AMRB on June, 25, 1991. Nine bids were received by the 2:00 p.m. deadline from the following contractors.

Shumaker Trucking and Excavation Contractors, Inc
P.O. Box 1442
Great Falls, MT 59406
Bid Amount $135,463.00

High Mountain Construction
2530 Villard
Helena, MT 59601
Bid Amount $193,099.62

Concrete Septic Tank Co.
3668 E. US Highway 12
East Helena, MT
Bid Amount $204,825.89

A. M. Wells, Inc.
Norris, MT
Bid Amount $208,404.00

Hallatt Reclamation Company
P.O. Box 169
Livingston, MT

McDaniel and Sons Contractors
P.O. Box 6716
Great Falls, MT 59406
Bid Amount 226,890.43

Sieben Ranch Company
P.O. Box 167
Wolf Creek, MT
Bid Amount $232,337.00

G & N enterprises
1023 Maple
Helena, MT
Bid Amount $244,784.00

Sudan, Inc.
555 S. Fendale Drive
Bigfork, MT
Bid Amount $257,081.00

The Engineers estimate was $215,730.00 and the average of the nine bids was $214,336.95. A copy of the bid tabulations is included in Attachment A of this report.

The bids were checked for correctness and tabulated by AMRB. Bids were then forwarded to Robert Peccia & Associates for review and recommendation. Subsequent to a pre-award meeting, Shumaker Trucking and Excavating of Great Falls was selected as the lowest responsive bidder for the project.

The Notice of Award to Shumaker was prepared and executed by AMRB and Shumaker on July 27, 1991. The Agreement between contractor and owner was executed on August 5, 1991. Copies of the Pre Award meeting notes, the Notice of Award and the Agreement are included in Attachment A to this report.

The Notice to Proceed was issued on September 10, 1991. The delay in issuing the Notice to Proceed was requested by Shumaker so that summer erosion control procedures would not be necessary prior to final seeding. Work was scheduled to begin no later than September 16, 1991 and be completed within 45 calendar days for a completion date of October 30, 1991. A copy of the Notice to Proceed is included in Attachment A to this report.

3.2 Construction Administration

A Pre-Construction conference was held on September 11, 1991 and the meeting summary is included in Attachment A. Construction commenced on Monday September 16, 1991 with 7 personnel including one supervisor, three equipment operators, and three laborers. Nancy Granger of Robert Peccia & Associates was present as construction observer.

Change Orders

Change Order No. 1 consisted of 17 items and was the only change order necessary during the course of the project. Items 1-12 reconciled actual installed quantities costs versus bid estimated quantities. Item 13 adjusted the contract amount for substitution of single and double diagonal fence panels. Item 14 increased the contract time by five days due to the increase in quantities. Item 15 allowed the Contractor to haul lime offsite instead of onsite containment. Item 16 pertained to a Work Directive Change involving the substitution of salvage of one drum flotation separator for a cone crusher and a jaw crusher. And item 17 reflected a deduction for failure to salvage the entire small flotation separator. Copies of Work Directive Change No. 1 and Change Order No. 1 are included in Attachment B of this report.

Change Order No. 1 resulted in a net overall increase of $10,264.00 for a total contract price of $145,727.00. This equates to a 7.58% increase in project cost over that originally bid.

Work Stoppages

No shutdowns occurred during the course of the project.

Requests for Payment

Payment Request No. 1 was processed on October 15, 1991 for a total amount earned to date of $99,809.10. The Work Directive Change was issued September 17, 1991. Punchlist items, and items requested in the Work Directive were completed prior to the Final Pay Request No. 2 on November 5, 1991. The amount of Pay Request No. 2 was $45,917.90 which included a 100% release of retainage. Copies of Pay Requests Nos. 1 and 2 are included in Attachment C to this report.

Substantial Completion

Joe Aline and Ken Carlstad of Shumaker, Nancy Granger and Robert Morton of RPA and Dale Herbort of AMRB met on November 7, 1991 for the final inspection. Punchlist items were discussed and agreed upon.

The project was deemed substantially complete November 8, 1991. Incidental punchlist items were completed after snow cover from an October 25th storm had melted. After items on the initial punchlist were completed, it was discovered that the staging area where equipment and trailers had been stored was disturbed while removing equipment. The Contractor raked and reseeded the area as well as completed all other punchlist items prior to the date of final acceptance, November 18, 1991. Copies of the Certificate of Substantial Completion and Certificate of Acceptance are included in Attachment A to this report.

Final Completion and Approval

The Final Pay Request (No. 2), Change Order No. 1, Affidavit on Behalf of Contractor, Contractor's Certificate of Completion, Certificate of Substantial Completion, Consent to Surety Company to Final Payment, and Certificate of Acceptance were prepared, executed and forwarded to AMRB on November 25, 1991.

4.0 CONSTRUCTION

4.1 Description of Project Plan

The project was divided into an upper site which consisted of the northern tailings pond, the mill building and the adits and a lower site which consisted of the southern tailings pond. A listing of the project work task descriptions for the upper and lower sites follows. Please refer to the Record Drawings in Attachment E for additional information.

Golden Messenger - Upper Site

- Improved access to construction area.
- Carefully disassembled existing mill building. All existing timbers 8 inches by 8 inches by 10 feet in length, or greater, were stockpiled next to north end of upper tailings pond. Existing two cylinder steam engine, one drum slurry separator, a jaw crusher and one cone crusher were carefully removed and salvaged.
- Graded south slope of waste rock pile #1 to 3:1 maximum slope. Waste rock pile #1 was shaped so as to provide a defined channel on the south slope of the pile.
- Two existing adits were closed; one adit was backfilled and a gated culvert closure was installed in the other.
- Existing reinforced sumps and depressions were excavated, reinforcing removed and backfilled.
- Graded all devegetated areas for positive drainage.
- Riprap was removed from waste rock pile #2 and then was graded.
- Calcium Carbonate was removed from site for use by contractor.
- Applied straw/wood fiber and fertilizer as a soil amendment to mill tailings.
- Placed coversoil on devegetated areas. A minimum cover depth of 4 inches was applied.
- Fertilized, seeded and mulched all disturbed areas, including channels lined with erosion control mat. Straw mulch was used on mild slopes and slopes greater than 3:1 were hydromulched.
- Constructed erosion control mat lined drainage channels, including key trenching and stapling.
- Installed fence and gates surrounding the tailings pond.
- Installed Owner provided signs.
- Removed and buried or burned all debris including mixing vat, sluice boxes, logs, boards, cans, lean-to, debris piles, dugout and concrete, and provided general site cleanup.

Golden Messenger - Lower Site

- Improved access to construction area.
- Excavated stilling basins and drainage channels.
- Excavated and graded tailings dam faces to 3:1 finish slope.
- Constructed terraces on tailings dam faces.
- Placed excess fill on top of individual tailings ponds.
- Graded all devegetated areas for positive drainage.
- Constructed riprap lined drainage channels, including bank stabilization fabric on both upper and lower tailings pond dam faces.
- Placed riprap in stilling basins #1 and #2 with dimensions of 25'x25'x30" thick.
- Prepared devegetated areas to receive coversoil.
- Applied straw/wood fiber and fertilizer as a soil amendment to tailings ponds.
- Placed imported coversoil on devegetated areas with a minimum thickness of 4 inches.
- Fertilized, seeded and mulched all disturbed areas, including channels lined with erosion control mat.
- Constructed erosion control mat lined drainage channels, including key trenching and stapling.
- Installed fence and gates around tailings pond.
- Installed Owner provided signs.
- Removed and buried or burned debris and provided general site cleanup.

4.2 Planning and Design

The Golden Messenger Mine project was first conceived in 1987 when a preliminary design was done. The project was dropped until 1989 at which time a Grant Narrative was prepared for the DSL - AMRB. At that time, the AMRB decided to increase the scope of the Golden Messenger project to include six additional sites within the York mining district. An Environmental Assessment for the York mining district was prepared for the Department. To comply with the intent of the National Contingency Plan (NCP), a work plan, sampling and analysis plan and community relations plan were also prepared for AMRB. In addition, a second Grant Narrative was prepared and submitted by the AMRB to the U.S. Office of Surface Mining (OSM).

The Preliminary Assessment involved site visits to determine reclamation alternatives as well as sampling locations and frequency. Soil, mine tailings and waste rock were sampled to determine any risk and/or potential adverse effects to public health and safety. Sampling also enabled the determination of any necessary chemical amendments. During the Preliminary Assessment, it was determined that timbers and equipment in the mill building should be salvaged. A site survey was done to verify existing topography and to determine optimum locations for a constructed channel through the site. And finally, adit locations were mapped and adit openings were measured for closure.

One aspect of the design for the Golden Messenger involved designing a channel to convey runoff through the project site and around the mill tailings. The upper tailings pond dam face had at some time in the past failed, causing tailings to be eroded from the dam and to be transported downstream towards Trout Creek. A concern in the design was to prevent water from ponding up on top of the dam which might cause instability of the dam. In addition, even though the tailings were relatively chemically benign, routing runoff around the tailings would reduce erosion of the tailings by surface runoff as well as reducing the amount of water leaching through the tailings and into the groundwater.

The 100-year flood was calculated using regression equations developed by the U.S. Geological Survey for ungaged streams in Montana. (USGS, 1986. Methods for Estimating Magnitude and Frequency of Floods in Montana Based on Data Through 1983. Water Resources Investigations Report 86-4027.) The flow calculated was 149 cubic feet per second. The channel was sized using the calculated discharge and the slope of the channel. On the upper and lower tailings ponds, check dams were added to reduce the velocity. The steeper dam faces required riprap which was sized according to federal highway design standards.

4.3 Construction Activities

Shumaker Trucking and Excavating began work on September 16, 1991. The contractor had four to nine workers with an average of six workers employed on the project. Site access was accomplished on 9/16/91 by grading the existing, but seldom used haul road up to the mine site. The existing access road was not conducive to heavy equipment traffic due to the steeper grade and the tight curves.

During the first seven days of the project, the work tasks included picking up debris around the mill building, burning debris, removing the drum flotation separator and steam engine, disassembling the mill building, stockpiling riprap from waste rock pile #2, and grading the lower tailings pond. The removal of the drum flotation separator was accomplished by placing drill pipe under the separator and using both the dozer and the excavator to pull the intact separator from the building. Disassembly of the mill building was done using two to three laborers, the dozer and a front end loader. The dozer was used to knock down sections of the building; timbers were then salvaged and hauled with a front end loader. The 977 front end loader with a skeleton bucket was used to remove and stockpile riprap from waste rock pile #2. The D8 dozer was used to excavate and grade the lower tailings pond.

From 9/23/91 through 9/29/91 the work tasks accomplished included completion of mill building dismantling, salvage of cone and jaw crushers, excavating and grading the upper tailings pond, excavating the channel in the lower tailings pond, backfilling adit #1 with riprap, installation of 75 feet of fence and approximately 13 corner posts and hauling riprap from the stockpile to the lower tailings pond. The mill building was substantially disassembled by 9/26/91 except for several pieces of concrete foundation which were broken and buried in place. It was felt that burying the foundations on the steep slope would make the slope more stable and help to match it to surrounding grades.

The grade of the riprap channel in the lower tailings pond was surveyed by the Superintendent and the Observer and found to be too steep at the base. The grade of the riprap channel on the upper tailings pond was also surveyed and found to exceed a 4:1 slope. The dozer was used to decrease the channel slope on the dam faces to a 4:1 slope. Most of the grading of the lower tailings pond was completed this week. The contractor requested that he be able to use coversoil to build the terrace on the lower tailings pond slope, rather than tailings material. His request was approved by the Project Manager.

Access to adits #1 and #2 were cleared and grubbed. The waste rock pile directly below (east of) adit #1 was graded so that a front end loader could lift rock up the slope to be used for backfill material. The access road to adit #2 was cleared of brush and debris but no topsoil was available for salvage.

Debris from the mill building and surrounding area was placed in a 25 foot deep trench, crushed and buried with a minimum of two feet of cover.

Coversoil samples were collected from an area directly south of Brown's Gulch on land owned by Gary Koehler. The Contractor located the coversoil source area approximately 600 feet from Trout Creek in bottom lands. The soil was black and appeared to be high in organic matter. The water table level was one foot below the surface and soil was reduced (saturated). A gray clay lens was present at approximately 18 inches which appeared to contain an unacceptable clay content. Soil was sampled from 0 to 12 inches at three locations, the third sample being significantly dryer and lighter in color than the other two. Results of the soil analysis showed the soils to fall within acceptable limits for coversoil as described in the Technical Specifications. At the request of the landowner, a pond was constructed at the coversoil borrow area and irrigation channels were repaired.

During the week of 9/30/91 through 10/6/91 the work tasks completed included grading the slope at the mill building site, excavating the riprap channel and stilling basin on the upper tailings pond, placement of bank stabilization fabric, Type 5 and Type 1 riprap in the lower tailings pond, hauling coversoil to the upper tailings pond area, culvert closure and backfill of adit #2, burning debris, and grading waste rock pile #1.

Most of the riprap channel on the lower tailings pond was completed during this week. The fabric was placed in strips of 75 foot lengths running parallel to the channel. Parallel and perpendicular laps were three feet. Key trenches were used on channel edges and along the contour of the channel every 25 feet. The front end loader was used to haul Type 5 and Type 1 riprap from stockpiles. The loader was driven along the channel bottom to place riprap onto the bank stabilization fabric. The loader also placed rock from either edge of the channel. The fabric was rolled up along the channel bottom to facilitate riprap placement without operating equipment on the fabric. The excavator was then used to spread the Type 1 riprap up onto the 3:1 sides of the channel.

The Superintendent raised questions concerning the specified key trenches on contour and the three foot parallel laps called for in the design. The Observer called design engineers at Amoco Mill who strongly recommended three foot parallel laps and contour key trenches. Laps and key trenches were constructed as specified. In addition, a two foot wide, four foot deep key trench at the head of the channel was excavated and the fabric was covered with six to eight inches of Type 5 riprap and filled with Type 1 riprap.

There was also a question about Type 5 riprap to be used for bedding in the riprap channel. The Superintendent had intended to use material from waste rock pile #2; however, the material contained too many fines and an inadequate amount of gravel between 0.6 inches and 2.4 inches. The Superintendent opted to purchase crushed and sorted gravel from Big Sky Gravel in Helena rather than sort gravel on site.

The culvert closure for adit #2 was completed on 10/3/91. The 24 foot CMP culvert was placed in the adit on a four inch bedding of tailings material. Fill material from waste rock pile #1 was used to backfill the culvert on both sides and the top. The adit gate closure was installed on the culvert.

A second burn permit was issued by the Forest Service. Wood debris was pushed into a 20 foot deep pit with the dozer to help contain the fire. As the debris burned, more debris was added to the pit. Unburned debris from fire of the previous week was sifted out of the burned debris piles with the front end loader and skeleton bucket and added to the pit as well. At the end of the day, the fire was extinguished by pushing dirt into the pit. The pit was filled and the surface was graded.

During the week of 10/7/91 through 10/13/91 the work tasks included excavating and hauling coversoil from the borrow area to the upper tailings pond, straw amending upper and lower tailings ponds, placement of bank stabilization fabric, Type 1 and Type 5 riprap in the upper tailings pond, burning debris, spreading coversoil on upper tailings pond, grading mill building site, and installing approximately 2300 feet of fence.

The excavator and a front end loader was used at the borrow area to stockpile the coversoil and load it into three dump trucks which hauled it to the upper tailings pond. Coversoil was very wet and by the end of the week had dried enough to be turned with the grader. Care was taken not to turn tailings up into coversoil during this process.

Incorporation of the straw amendment on the upper and lower tailings ponds was not adequate using the disk alone; therefore, after disking, the grader blade was tipped so that only the leading edge would touch the ground and the straw was more completely incorporated in this manner. The method yielded results similar to use of a moldboard plow. The Superintendent pointed out that the specifications were vague concerning straw amendment and coversoil of the mat-lined channels. The Observer pointed out that those areas were included in the estimated quantities and the Superintendent agreed. In the upper and lower tailings pond dam faces,the straw amendment was ripped into tailings perpendicular to the slope with the dozer and then disked.

Because the Contractor had exhausted his supply of 12 foot wide bank stabilization fabric, a Fishbein Bag Closer was used to stitch double seams with polyester thread in bank stabilization fabric on the northern 200 feet of the riprap channel. Civil engineers at Amoco Mills were consulted prior to approving this procedure. All seams were inspected before Type 5 riprap was spread over fabric.

Dry coversoil from the borrow area (OM = 1.5%) mixed with wet coversoil was used in areas adjacent to the mat-lined channels and other disturbed areas where spreading wet coversoil would be difficult. The dry coversoil was tested and is represented by test pit #3 and falls within acceptable limits for coversoil as defined by the Technical Specifications.

During the week of 10/14/91 through 10/20/91 completed work tasks included transporting salvaged mill equipment to Lewis and Clark County fairgrounds, spreading coversoil, seedbed preparation and fertilizing on upper and lower tailings pond areas, waste rock pile #1, and mill building site, completion of upper tailings pond riprap channel, and placement of erosion control mat in upper and lower tailings pond channels.

The small flotation separator and timber supports, jaw crusher and cone crusher were loaded on a lowboy trailer and a dump truck using two front end loaders and chains. They were transported to the Lewis and Clark County fairgrounds where they were cleaned and unloaded.

A source of wood fiber from a small, locally owned sawmill was located and the Superintendent requested that he be able to substitute this for straw mulch. The wood fiber was sampled and analyzed for size to assure compliance with Technical Specifications. The mulch was applied to waste rock pile #1 and the bottom slope of the mill building site.

The Observer and the Project Manager surveyed the upper tailings pond riprap channel to check the slope. The slope ranged from 22% to 30% with an average of 27%. The original slope of the channel prior to placement of fabric and rock was 25%. The deviation in slope from the original is due to the placement of the rock. In addition, a section near the base of the channel was found to have inadequate depth. The Superintendent had several laborers move rock from the channel bottom to the sides. This was done several times before the end of the project and finally, the excavator was used to move a sufficient amount of rock to yield the correct depth.

During the week of 10/21/91 through 10/27/91 work tasks completed included fertilizing, seeding and mulching all disturbed areas, installing erosion control mat and check dams in upper tailings pond, reclaiming coversoil borrow area, reclaiming the haul road, installing fence, debris pickup and fine grading.

The seed drill was calibrated to deliver the correct rate of 26.75 pounds seed per acre by staking a known area and applying a measured amount of seed. Once calibration was complete, the upper and lower tailings ponds, waste rock pile #1, both adit areas, the mill building site and waste rock pile #2 were fertilized, seeded and mulched. Straw mulch was blown onto seeded areas with a haybuster and then crimped in. On the lower tailings pond dam face, the straw mulch was tracked in using the bulldozer. On areas with slopes greater than 3:1 including the mill building site, waste rock pile #2 and adit #1, seed was broadcast by hand at a rate of 53.5 pounds per acre and hydromulch was applied .

The key trenches on the edge of the mat-lined channel were an item of concern. A Ditch-Witch was used to dig most of the trenches which were then backfilled by hand. Most of the trenches were either incompletely filled or filled but not compacted. The Observer requested that the trenches be more completely compacted and smoothed so that water would not run in the trenches and cause them to erode. Technical Specification 202 (Excavation and Embankment) and 430 (Subsidence Grading and Backfilling) as well as the drawings supported that request. The Oliver tractor was driven over the key trenches after the trenches had been filled and were then smoothed by hand to make an even transition from the tailings pond area to the channel. Disturbed areas were then reseeded.

Fence for the project was completed this week. The fence circumscribes the two tailings pond areas and includes three gates. Fence was not installed around waste rock pile #1, the mill building site or waste rock pile #2. Some concern exists that off road traffic may cause undue erosion at these sites. Three kelly humps were constructed on the steeper section of the haul road to divert any runoff off the road and help prevent erosion. The road was ripped and graded smooth with the motorgrader prior to broadcast fertilizing and seeding.

4.4 Major Equipment List

Following is a list of the equipment used by the Contractor for the Golden Messenger project.

Type	Make/Model	# on Project
Bulldozer with ripper teeth	D-8 CAT, 235 HP	1
Tracked Excavator	EL 300 CAT	1
Front end loader (rubber tired)	966C CAT, 140 HP	2
Front end loader (tracked)	977K CAT, 150 HP	1
Dump truck	12 CY capacity	3
Motorgrader with ripper teeth	140G CAT	1
Tractor w/attachments •Ford 230 disk •crimper	Case 60	1
Tractor w/attachments •straw mulcher	Oliver 1855 Haybuster	1
Four-wheel ATV	Yamaha	1
3/4 ton pickups	Ford	1
Fifth wheel trailer		1
Hand tools (shovels)		4
Chainsaw	Stihl	2
Pulley hoist/rope		2
Sewing Machine	Fishbein bag closer	1

5.0 COST SUMMARY

This section of the report includes a listing of pay items and a summary of costs for each site.

5.1 Listing of Pay Items Including Quantities Used and Costs

Description	Final Quantity	Final Cost	Final Cost per Unit	Percentage of Total Project Cost
Mobilization, Bonding, Insurance	1 lump sum	$ 5,000.00		3.4%
Site Access	1 lump sum	5,000.00		3.4%
Debris Cleanup	1 lump sum	500.00		0.3%
Salvage Mill Equipment (3 pieces)	1 lump sum	19,600.00		13.5%
Site Earthwork (12,450 CY)	1 lump sum	5,100.00		3.5%
Close Mine Opening: Adit	2 each	3,000.00	1,500.00	2.1%
Straw Amendment	7.8 acres	3,900.00	500.00	2.7%
Import Cover Soil	3,888 cu yds	40,824.00	10.50	28.0%
Fertilize & Seed	9.3 acres	1,860.00	200.00	1.2%
Mulch	8.8 acres	4,400.00	500.00	3.0%
Farm Fence (Type F-4M)	4,120 lineal feet	6,534.00	1.75	4.5%
Farm Fence Gate, 16 feet	3 each	300.00	100.00	0.2%
Erosion Control Mat	2,510 sq yds	16,315.00	6.50	11.2%
Riprap - Type 1	1,789 cu yds	17,890.00	10.00	12.3%
Riprap - Type 3	22 cubic yards	660.00	30.00	0.5%
Riprap - Type 5	464 cubic yards	9,280.00	20.00	6.4%
Bank Stabilization Fabric	2,782 sq yds	5,564.00	2.00	3.8%

Change Order Quantities Included:

Description	Change in Quantity
Straw Amendment	0.8 acres increase
Import Cover Soil	388 cubic yards increase
Fertilize & Seed	0.3 acre increase
Mulch	0.9 acre decrease
Farm Fence Gate	1 each increase
Erosion Control Mat	290 square yard decrease
Riprap - Type 1	774 cubic yard increase
Riprap - Type 3	7 cubic yard increase
Riprap - Type 5	64 cubic yard increase

5.2 Summary of Costs

The total cost on a per acre basis for the Golden Messenger project was approximately $16,560.00 per acre based on a project size of 8.8 acres. Change Order No. 1 resulted in a net overall increase of $10,264.00 to a total contract price of $145,727.00. This equates to a 7.58% increase in project cost over that originally bid.

The Consultant costs incurred for site investigation, design and construction management totaled $73,075.26 for the project. This amount is 50.15% of the total construction costs. The high design cost compared to construction can be attributed to several factors including: 1) the bid for the construction project was $70,003 lower than the Engineer's estimate, 2) a portion of the design and the Environmental Assessment includes five other sites in the York mining district, 3) The AMRB decided to meet the intent of NCP requirements after the Environmental Assessment was completed and a Work Plan, Sampling and Analysis Plan, Community Relations Plan and Health and Safety Plan had to be written, 4) the project was dropped and restarted several times since its initiation in 1987, and 5) the scope of the project was increased each time the project was restarted resulting in additional investigation, landowner consent and design. The analysis of construction and engineering costs is presented in Attachment D.

A cost breakdown of the lump sum bid items follows.

Description	Total Cost	Quantity	Cost per Unit
Debris Cleanup	$ 500.00	8.8 acres	$ 56.81/acre
Salvage Mill Equipment			
Flotation separator	3,500.00	1 each	3,500.00/separator
Steam Engine	2,000.00	1 each	2,000.00/engine
Crushers	2,000.00	2 each	1,000.00/crusher
Dismantle Mill	12,500.00	1 each	12,500.00
Site Earthwork	5,100.00	12450 cu yds	0.41/cu yd

6.0 PROJECT SUMMARY

The Golden Messenger Reclamation Project was awarded to Shumaker Trucking and Excavating, Inc of Great Falls, Montana on July 27, 1991. Construction of the project began on September 16, 1991 and proceeded on schedule through November 8, 1991 at which time the project was considered substantially complete. Final completion and approval was November 27, 1991.

The primary intent of the reclamation design was to regrade and revegetate the two tailings pond areas, to construct a channel to convey runoff around the tailings pond, to dismantle the dilapidated mill building and to salvage equipment for the State Historical Society. These goals were accomplished in a timely manner below the estimated cost and bid cost was exceeded by only 7.6%.

6.1 Site Conditions after Completion

Upon completion of the project, the site was judged to be in excellent condition. The straw mulch on the lower and upper tailings pond areas was crimped adequately enough to withstand a storm accompanied by high winds which occurred several days after completion. Hydromulch on the steep mill building site appeared to be somewhat light on the north end of the slope. Key trenches along the mat-lined channel appeared to be well compacted and graded to insure runoff flow into the channel. The erosion control mat in the channel provided full coverage of the channel and was well stapled. During the final inspection it was noticed that although the site was snowcovered, the areas where debris had been burned in pits were devoid of snow. It was thought that the metal debris retained some heat from the fire.

Please refer to the Record Drawings in Attachment E for more detail.

6.2 Maintenance and Follow-Up

It is likely that there will be a problem with trespass on the site since, prior to construction, the site was popular with local residents as a place to ride off-road vehicles, horseback ride and to target shoot. Keys for locks on fence gates and adit culvert gate have been delivered to the following people: Dale Herbort, AMRB; Dave Tumer, U.S. Forest Service, Helena Ranger District; Mrs. Joseph Virag, Landowner; and Robert Morton, RPA.

There are several items which should be considered during the 11th month Warranty Inspection. The key trenches, erosion control mat and staples in the mat-lined channel should be inspected to insure that the mat is providing adequate protection from erosion in the channels. The transitions between the mat-lined and riprap channels should also be inspected for undermining of riprap or bank stabilization fabric.

The locations were debris was burned in pits should be inspected for adequate vegetation establishment. All areas where debris was buried should be inspected for subsidence.

Erosion throughout the project and especially on the steeper slopes should be inspected for excessive erosion. Weed growth should be examined to determine if weed control measures are necessary. Fencing should remain in place for a minimum of three years to assure vegetation establishment.

6.3 Comments and Suggestions

The Golden Messenger Project was executed without any significant problems. Shumaker Trucking and Excavating was satisfactorily prepared with equipment and a well supervised work force to perform the tasks required for completion of the contract.

Most of the problems that occurred during the project were a result of a difference in interpretation of the specifications in the contract. For example, the contract specified Type I riprap to be placed in the channels. The intent of the design was to place rock sized such that the median size (d_{50}) was one foot in diameter. The Technical Specification for Type I riprap gives only the largest and smallest permissible rock which leaves room for interpretation. The simplest solution would be to better define the gradation of the riprap in the Specials Provisions. However, Technical Specification 530.00: Riprap could be amended to better define the gradation of bank protection riprap.

The key trenches for the mat-lined channel were intended to have staples in the trenches to insure secure anchoring. This is a manufacture's recommendation and the Technical Specification specifically mentions this point; however some interpretation is still required. Because the detail drawing did not show the staples in the key trenches, this became a point of contention between the Observer and the Contractor. A suggestion would be to note the requirements for stapling in key trenches on the detail drawings.

Another problem encountered during construction involved the salvage of the small flotation separator. The salvage was to include the metal hopper attached to the bottom of the separator; however, this was not specifically pointed out in the contract. Even though the Observer had previously specifically stated that the hopper should be salvaged, the Contractor removed and subsequently damaged the hopper. A suggestion would be to detail all parts of an item to be salvaged more completely in the Specifications.

Dismantling the mill building was intended to occur such that the timbers in the building could be salvaged. However, the Contractor raised serious questions about the safety of his workers if all the timbers were to be salvaged. Salvageable timbers from the mill building were specified as any 8-inch by 8-inch timber exceeding ten feet in length. The method of salvage was not detailed in the Specifications, nor should it have been. During construction it was discovered that the majority of the timbers were dry rotted, a possibility that had not been considered in the design. However, this facilitated the field decision to allow the Contractor's proposed method of dismantling. The corner beams of the building were pulled down resulting in collapse of the building. Any timbers considered salvageable were then pulled from the debris and stockpiled. The Specifications and construction methods were appropriate for the situation but, in future projects, the Specifications should better reflect the intent of the salvage.

Another problem which arose related to the salvage of timbers was that the AMRB made an offer to purchase the salvaged timbers from the Landowner. It was later determined that the purchase was not possible. This put the relationship with the landowner in jeopardy. The problem was resolved by maintaining open communication between the Landowner, AMRB and RPA.

A problem with the closure of adit #2 was that more area was disturbed to close the adit than had been intended. The intent of the design was to avoid disturbance of the area surrounding the adit. However, due to the Contractor's method of delivering backfill material to the adit opening, the slope below the adit was regraded and had to be reclaimed. In future projects, hand backfilling or equipment type and number of trips could be specified for areas in which disturbance is to be kept at a minimum.

Finally, the fence location, as specified in the plans, did not allow for any extra fencing except around the two tailings ponds. Near the completion of construction it was determined that the area around the mill building site should be fenced. The subcontractor was asked to fence the area; however, he refused due to the time of year and the fact that many of the corner panels would have to be placed in waste rock. Although not always possible, project design should anticipate and specify all potential fence locations.

The design of a project requires insight to common problems which occur during construction, all of which cannot be anticipated. In order to facilitate some of the problems which occurred during this project, certain specifications and details on the plans could be more specific. In particular, detail drawings for the key trenches for the mat lined channel could have been provided as well as detail drawings for the stilling basins and the transition between the riprap and mat lined channels.

The AMRB should consider amending some standard Technical Specifications. Although Technical Specification 530.00: Riprap closely follows Montana Department of Highways specifications, it may not be applicable to all situations. A simple change to clarify this specification would be to remove the word "nominal" and replace it with the word "average" or "median". Technical Specification 340.00: Erosion Control Mat could include standard drawings applicable to key trenching and staple patterns. Also Technical Specification 650.00: Construction Fabric needs to be updated to reflect changes in fabric properties.

The current AMRB policy requires reclamation consent prior to project design with no follow up prior to reclamation construction. This can lead to misunderstandings between the Department and the landowner. The protocol followed for this project was to gain consent prior to design and then give landowners additional opportunity to review project plans prior to bid. This eliminated potential conflicts which may otherwise have ensued during and after construction. It is recommended that the protocol followed for this project should be followed for all AMRB projects. In the case where there are many landowners involved, such as a project covering an entire mining district, then a public meeting subsequent to design and prior to construction is recommended.

ATTACHMENT A

Bid Tabulations and Miscellaneous Administrative Forms

MEETING SUMMARY
YORK MINING DISTRICT - PREBID CONFERENCE
JUNE 14,1991

Representatives of Robert Peccia and Associates and the Department of State Lands, Abandoned Mine Reclamation Bureau conducted a Prebid Conference for the York Mining District reclamation project. Interested contractors met at the York Bar at 2:00 pm, Friday, June 14, 1991. Robert Morton introduced himself and invited everyone to follow us up to the Golden Messenger mine site.

At the site, Dale Herbort of the DSL-AMRB, provided a brief summary of the reclamation project and the tentative schedule. A sign-in sheet was passed around. A List of Attendees and the conference agenda is attached to this Summary. Bob Morton then reviewed the details of the bid package including the Scope and Goals, Instruction to Bidders, Contract Time, Contract Requirements, Special Provisions and Cost Estimate. Specific points mentioned included:

- Site earthwork is a single (lump sum) cost item.
- Insurance requirements are in the Standard Specifications.
- Contractor Supervision must be present on site at all times.
- No permits or fees are required for this project. Permits may be required for burning, water coversoil and riprap sources.
- Contractor is responsible for safety.
- Field office (trailer) not required on site. Sanitary facilities and field office are the responsibility of the Contractor.

Bob Morton asked for questions.

Question: Where is the Riprap source specified in the bid package?

Reply: Bob Morton pointed out waste rock pile #3 and discussed the types required.

Question: Where the plans specify grade to drain, what is the minimum grade or is this up to the Contractor?

Reply: The maximum grade is specified on the plan sheets as 5:1 and the grade is to be approved by the Site Engineer.

Question: Explain the grading of the tailings dam faces.

Reply: Bob Morton explained that the toe of each of the dams is not to be moved downgradient and that the excess excavated material is to be moved up the dam faces and spread over the respective pond areas.

Question: What about moisture in the tailings material?

Reply: Bob Morton explained the varved nature of the tailings and the findings from the drill holes.

Question: Can the Contractor have a field office on site and what are the rules for personnel camping on site?

Reply: Bob Morton explained that the Contractor can have a trailer on site if he so chooses and that personnel camping on site would have to be approved by the Forest Service.

Question: What about burning?

Reply: Bob Morton explained that the Forest Service will require a permit for burning if this is chosen as on option for disposal of debris. He also discussed burying debris.

The group moved up to the mill building and Bob Morton pointed out the mill equipment which is to be salvaged.

Question: What is the Contractors liability for damage to the equipment to be salvaged?

Reply: Dale Herbort and Bob Morton explained that if damage occurred, it would be up to the Engineer to decide whether or not the contractor made a reasonable, good faith attempt at salvage. If the Engineer determines that the Contractor was negligent in his attempt, the bid item will not be paid.

Question: Describe the salvage of timbers.

Reply: Bob Morton explained that the salvage will depend on the integrity of the timbers. They may have to be salvaged after the building is dismantled. The concrete foundations come out under debris removal and can be buried or removed. Blasting of the foundation is an option as well as covering it in place. He referred them to the Technical Specifications.

Question: What is the source of cover soil?

Reply: There is very little on site and none in the tailings area. The physical and chemical characteristics are described under the Standard Specifications of top soil. The 3500 cubic yards estimated for the project is for the tailings pond areas.

Question: Can the mill building be burned where it stands?

Reply: No, but the debris may be burned after dismantling the building with a Forest Service permit and Landowner consent.

Question: What if the landfill will not accept the debris?

Reply: Dale Herbort stated that Scratchgravel Landfill has a special area where they accept timbers.

Question: Explain the final seeding requirement of the bid package.

Reply: Final seeding will not occur until after October 15. Therefore, there will probably be a temporary shutdown of the project until that date. Burning of debris may be more practical at that time.

Question: Can the wood timbers be buried?

Reply: No, except in small amounts due to the possibility of subsidence. They were referred to the Technical Specifications.

The group was then taken to the upper spoils pile. Bob Morton explained the grading of the back slope of the pile and the placement of the channel away from the road. The pile of calcium chloride was pointed out to the group and Bob Morton explained the provisions for its removal and disposal.

The tour continued to the upper end of the site along the natural channel. Debris in the channel was pointed out and Bob Morton stated that the disturbance of trees and brush within the channel should be kept to a minimum during debris removal.

The lower adit was pointed out to the group and the culvert closures were described. Bob Morton explained that landowners required access to the adit and that there was concern for Townsend bat habitat. The upper adit was shown to the group and the typical closure was described.

Question: Another question about the grading of the dam faces was raised.

Reply: The grading was discussed again.

Question: One Contractor felt that the 45 day contract period was insufficient to complete all the work. He requested a period of 60 or 70 days.

Reply: Bob Morton and Dale Herbort discussed the possibility of breaking the 45 days into work periods with temporary shut downs. They also acknowledged that the start date could be later than that specified in the bid if the DSL-AMRB and Contractor came to a mutual agreement.

Question: Can the work day be modified?

Reply: The specified work day of 8:00 am to 5:00 pm, 5 days per week may be modified by the Contractor as long as he notifies the Engineer ahead of time, as provided in the Standard Specifications.

The group then proceeded back to the upper tailings pond area and dam face. Bob Morton showed where the channel will be laid. He explained that trees on the natural slope were not to be removed.

Question: Describe the placement of the fence.

Reply: The placement of the fence was described and the Contractors were referred to the Specifications.

The grading of the dam faces was again described. Bob Morton showed the approximate location of the slope break for the dam face and the channel and the placement of the channel at 4:1 slope.

Question: What are the specifications for site security?

Reply: Bob Morton explained that security during construction was the responsibility of the Contractor. He also talked about land ownership at the site.

Question: What about the slope at the mill building?

Reply: These slopes will be regraded to the natural slope and coversoiled if any is available.

Bob Morton explained that the existing berm below the toe of the lower dam must remain in place and undisturbed. He also described the mat lining for the channels

Question: What about the trees between the dams?

Reply: Minimize removal of these trees.

Question: Describe topsoil placement.

Reply: Bob Morton explained that 4 inches of topsoil is required everywhere, including in the mat-lined channels.

Question: Where are the likely sources for Type I riprap?

Reply: Dale Herbort suggested that the El Dorado Sapphire Mine and Montana City may be good sources. The possibility of using limestone riprap was discussed and Bob Morton stated that he would examine the specifications for riprap before he approved a limestone material.

Question: Will the Bidders list be sent out.

Reply: Dale Herbort agreed to send out the bidders list 5 days prior to the bid opening.

The meeting was adjourned at 4:15 pm.

Page 1 of

NAMES OF PERSONS ATTENDING

☒ PREBID CONFERENCE
☐ PRECONSTRUCTION CONFERENCE
☐ MONTHLY MEETING

FOR Golden Messenger Mine - York Mining District PROJECT

Lewis & Clark COUNTY, MT - MONT A/E or DSL-AMRB 91-002

DATE: June 14, 1991 TIME: 2:00 PM

Name	Address	Affiliation	Telephone Number
Randy McDaniel	Box 676 [illegible] Florence - MT 59833	McDaniel & Sons	453-4906
Mike [illegible]	16405 Folsom Rd	M-B Excavating	273-6901
[illegible]	"	"	"
Bill Sudan	555 So. [illegible] Bigfork, Mont	Sudan Inc.	837-6839
[illegible]	Box 167 Wolf Creek, MT	Sieben Ranch Co	458-9468
Ed Baxter	Billings, MT	Baxter Const.	259-6404
Dan [illegible]	Helena	Sharbono Const.	442-8122
John Mocke	E. Hel.	[illegible] Septic Tank Co	227-6806
[illegible]	2530 [illegible] Helena, MT	High Mountain Const.	443-1321
[illegible]	1023 [illegible]	G + V ENTERPRISES	443-2845
Geo. Brocklehurst	BOX 169 LIVINGSTON, MT	Hallett Co.	222-1446
I SEWELL	" "	" "	"
Randy NeSmith	"	"	"
[illegible] WILLISON	Box 981 Townsend MT 59644	Same	None

GOLDEN MESSENGER MINE - YORK MINING DISTRICT
LEWIS AND CLARK COUNTY, MONTANA

DSL/AMRB 91-002
DATE JUNE 27, 1991

BID TABULATIONS				ENGINEER'S ESTIMATE		Shumaker Trucking & Excavating Contractors, Inc.		High Mountain Construction Inc.		Concrete Septic Tank Co.	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization, Bonding and Insurance	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
2.	1	LS	Site Access	2,000.00	2,000.00	5,000.00	5,000.00	5,000.00	5,000.00	2,800.00	2,800.00
3.	1	LS	Debris Cleanup	20,000.00	20,000.00	500.00	500.00	18,000.00	18,000.00	17,800.00	17,800.00
4.	1	LS	Salvage Mill Equipment	7,000.00	7,000.00	20,000.00	20,000.00	4,000.00	4,000.00	20,750.00	20,750.00
5.	1	LS	Site Earthwork	56,025.00	56,025.00	5,100.00	5,100.00	31,125.00	31,125.00	40,000.00	40,000.00
6.	2	EA	Close Mine Opening - Adit	2,800.00	5,600.00	1,500.00	3,000.00	1,500.00	3,000.00	750.00	1,500.00
7.	7	Acres	Straw Amendment	1,000.00	7,000.00	500.00	3,500.00	1,590.00	11,130.00	428.57	2,999.99
8.	3,500	CY	Import Cover Soil	10.00	35,000.00	10.50	36,750.00	8.50	29,750.00	10.00	35,000.00
9.	9	Acres	Fertilize and Seed	700.00	6,300.00	200.00	1,800.00	685.00	6,165.00	633.88	5,704.92
10.	9	Acres	Mulch	700.00	6,300.00	500.00	4,500.00	1338.00	12,042.00	222.22	1,999.98
11.	4,380	LF	Farm Fence (Type F-4M)	1.50	6,570.00	1.75	7,665.00	2.34	10,249.20	2.50	10,950.00
12.	2	EA	Farm Fence Gate (16 foot)	75.00	150.00	100.00	200.00	500.00	1,000.00	150.00	300.00
13.	2,800	SY	Erosion Control Mat	7.50	21,000.00	6.50	18,200.00	10.00	28,000.00	5.42	15,176.00
14.	1,015	CY	Riprap (Type 1)	25.00	25,375.00	10.00	10,150.00	9.00	9,135.00	25.00	25,375.00
15.	15	CY	Riprap (Type 3)	15.00	225.00	30.00	450.00	25.00	375.00	20.00	300.00
16.	400	CY	Riprap (Type 5)	15.00	6,000.00	20.00	8,000.00	10.00 ~~400.00~~	4,000.00 ~~160,000.00~~	20.00	8,000.00
17.	2074	SY	Bank Stabilization Fabric	2.50	5,185.00	2.00	4,148.00	6.33	13,128.42	5.00	10,370.00
18.	1	Acre	Lime Application	1,000.00	1,000.00	1,500.00	1,500.00	2,000.00	2,000.00	800.00	800.00
TOTAL FOR GOLDEN MESSENGER BID					215,730.00		135,463.00		~~349,099.62~~ 193,099.62		204,825.89

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GOLDEN MESSENGER MINE - YORK MINING DISTRICT
LEWIS AND CLARK COUNTY, MONTANA

DSL/AMRB 91-002
DATE JUNE 27, 1991

BID TABULATIONS				A.M. Wells, Inc.		Hallatt Reclamation Co.		McDaniel & Sons Contractors		Sieben Ranch Co.	
Item Number	Estimated Quantity	Unit	Description								
1.	1	LS	Mobilization, Bonding and Insurance	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
2.	1	LS	Site Access	1,000.00	1,000.00	4,477.00	4,477.00	11,697.00	11,697.00	9,000.00	9,000.00
3.	1	LS	Debris Cleanup	500.00	500.00	3,283.00	3,283.00	39,977.00	39,977.00	31,000.00	31,000.00
4.	1	LS	Salvage Mill Equipment	37,500.00	37,500.00	11,539.00	11,539.00	8,026.00	8,026.00	23,000.00	23,000.00
5.	1	LS	Site Earthwork	24,900.00	24,900.00	17,555.00	17,555.00	46,282.00	46,282.00	35,000.00	35,000.00
6.	2	EA	Close Mine Opening - Adit	250.00	500.00	1,241.42	2,482.84	1,225.00	2,450.00	1,200.00	2,400.00
7.	7	Acres	Straw Amendment	100.00	700.00	622.73	4,359.11	745.00	5,215.00	1,200.00	8,400.00
8.	3,500	CY	Import Cover Soil	14.00	49,000.00	20.51	71,785.00	10.91	38,185.00	8.50	29,750.00
9.	9	Acres	Fertilize and Seed	200.00	1,800.00	442.44	3,981.96	342.26	3,080.34	900.00	8,100.00
10.	9	Acres	Mulch	700.00	6,300.00	2,309.05	20,781.45	1,168.00	10,512.00	700.00	6,300.00
11.	4,380	LF	Farm Fence (Type F-4M)	1.00	4,380.00	1.81	7,927.80	1.53	6,701.40	1.75	7,665.00
12.	2	EA	Farm Fence Gate (16 foot)	100.00	200.00	261.53	523.06	160.00	320.00	75.00	150.00
13.	2,800	SY	Erosion Control Mat	1.00	2,800.00	6.95	19,460.00	3.23	9,044.00	7.50	21,000.00
14.	1,015	CY	Riprap (Type 1)	50.00	50,750.00	33.60	34,104.00	23.25	23,598.75	28.00	28,420.00
15.	15	CY	Riprap (Type 3)	50.00	750.00	45.44	681.60	39.00	585.00	12.00	180.00
16.	400	CY	Riprap (Type 5)	50.00	20,000.00	33.70	13,480.00	20.38	8,152.00	25.00	10,000.00
17.	2074	SY	Bank Stabilization Fabric	1.00	2,074.00	2.22	4,604.28	3.31	6,864.94	3.00	6,222.00
18.	1	Acre	Lime Application	250.00	250.00	122.55	122.55	1,200.00	1,200.00	750.00	750.00
TOTAL FOR GOLDEN MESSENGER BID					208,404.00		226,147.65		226,890.43		232,337.00

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GOLDEN MESSENGER MINE - YORK MINING DISTRICT
LEWIS AND CLARK COUNTY, MONTANA

DSL/AMRB 91-002
DATE JUNE 27, 1991

BID TABULATIONS				G & N Enterprises		Sudan, Inc.					
Item Number	Estimated Quantity	Unit	Description								
1.	1	LS	Mobilization, Bonding and Insurance	5,000.00	5,000.00		5,000.00		0.00		0.00
2.	1	LS	Site Access	7,500.00	7,500.00		20,000.00		0.00		0.00
3.	1	LS	Debris Cleanup	20,000.00	20,000.00		48,631.00		0.00		0.00
4.	1	LS	Salvage Mill Equipment	10,000.00	10,000.00		20,000.00		0.00		0.00
5.	1	LS	Site Earthwork	45,000.00	45,000.00		49,800.00		0.00		0.00
6.	2	EA	Close Mine Opening - Adit	1,500.00	3,000.00		4,000.00		0.00		0.00
7.	7	Acres	Straw Amendment	1,400.00	9,800.00		2,000.00		0.00		0.00
8.	3,500	CY	Import Cover Soil	15.00	52,500.00		59,500.00		0.00		0.00
9.	9	Acres	Fertilize and Seed	400.00	3,600.00		1,800.00		0.00		0.00
10.	9	Acres	Mulch	1,200.00	10,800.00		7,200.00		0.00		0.00
11.	4,380	LF	Farm Fence (Type F-4M)	2.70	11,826.00		5,000.00		0.00		0.00
12.	2	EA	Farm Fence Gate (16 foot)	150.00	300.00		500.00		0.00		0.00
13.	2,800	SY	Erosion Control Mat	10.00	28,000.00		14,600.00		0.00		0.00
14.	1,015	CY	Riprap (Type 1)	24.00	24,360.00		11,000.00		0.00		0.00
15.	15	CY	Riprap (Type 3)	30.00	450.00		450.00		0.00		0.00
16.	400	CY	Riprap (Type 5)	15.00	6,000.00		5,000.00		0.00		0.00
17.	2074	SY	Bank Stabilization Fabric	2.00	4,148.00		2,100.00		0.00		0.00
18.	1	Acre	Lime Application	2,500.00	2,500.00		500.00		0.00		0.00
TOTAL FOR GOLDEN MESSENGER BID					244,784.00		257,081.00		0.00		0.00

H:\RECLAM\AMRB\GOLDMESS.BID

MEETING SUMMARY
YORK MINING DISTRICT - PRE AWARD CONFERENCE
JULY 12,1991

A Pre Award Conference for the Golden Messenger Mine, York Mining District Project was held at the Department of State Lands on July 12, 1991 at 11:00. In attendance were the following:

Robert Morton, Robert Peccia and Associates (Engineer)
Nancy Granger, Robert Peccia and Associates (Engineer)
Larry Marshall, Department of State Lands, Abandoned Mine Reclamation Bureau (Owner)
Dale Herbort, Department of State Lands, Abandoned Mine Reclamation Bureau (Owner)
Gene Shumaker, Shumaker Trucking & Excavation (Contractor)
Joe Aline, Shumaker Trucking & Excavation (Contractor).

Robert Morton conducted the meeting. After introductions were made Bob referred to section 7 of the Instructions to Bidders, page ITB-4 of the Invitation for Bid (IFB).

CONTRACTOR'S ORGANIZATION AND AVAILABLE EQUIPMENT

Subsections (a) and (b) refer to the Contractors organization and available equipment and the Contractor's financial status which was briefly discussed.

PROPOSED SCHEDULE

Subsection (c) refers to the Contractors proposed schedule. The Contractor stated that they would prefer to start in mid-september and then be able to seed immediately after construction. The Owner stated that this would be acceptable and would probably fit into the stated contract time of 45 days.

INTERPRETATION OF SPECIFICATIONS

Subsection (d) relates to the interpretation of the specifications. Several items were covered during this discussion as follows.

Debris Cleanup and Disposal

The Engineer pointed out that the bid item for debris cleanup of $500.00 was significantly lower than his estimate of $20,000. The Contractor stated that this item was "unloaded" because it will not be paid until the end of the job. The Contractor stated that they intend to burn the debris. The Engineer explained that the Contractor needs permits from the Forest Service to proceed with burning. The Contractor stated that they had already checked with the Forest Service and received indication that a permit would be granted. The Engineer emphasized that if the Forest Service will not grant a permit, then the Contractor would have to have an alternative and a change order would not be approved in this case. The Owner stated that it was their understanding that the Forest Service would not issue a permit. The Contractor stated that they had contacted the Forest Service and had been referred to the DSL Fire Dispatch. The Contractor stated that with a 3 day prior notice the Forest Service would issue a permit with the appropriate restrictions and stipulations depending on conditions. The Engineer again emphasized that no change order would be approved if a burning permit was not issued and that other options should be considered.

The Contractor mentioned disposal of the debris at a landfill or transport of the debris to a alternative site for burning. He asked why burying the debris was not an option. The Engineer referred to the Technical Specifications and explained that a small amount of debris buried onsite would be acceptable but that large amounts of debris could cause subsidence and therefore would not be allowed. The Contractor pointed out that burying wooden debris in an oxygen deficient

environment with three feet of cover was common practice in other countries to preserve wood. The Engineer stated that the Specifications were clear on burying debris and they would be strictly followed.

Work Stoppage

The Contractor asked if stopping work after performing the dismantling of the mill building and burning the debris would be acceptable. The Owner stated that this would be permissible within contract guidelines (Notification and Acceptance). The Engineer reminded the Contractor that any work performed without the Site Inspector present would not be considered for payment. The Contractor assured the Engineer that he would be notified prior to any work performed.

Mill Equipment Salvage

The Contractor stated that dismantling the mill building will be an effort. The Engineer concurred and stated that the bid amount appeared to be appropriate. The Contractor asked where the mill equipment had to be hauled. The Engineer stated that the Equipment had to be delivered to the Lewis and Clark County Fairgrounds and unloaded by the Contractor.

Site Earthwork

Discussion of the site earthwork bid amount then followed. Concern was expressed by the Engineer that the bid amount breaks down to $0.40/yd. He pointed out that the Technical Specification call for serration (benching or stepping) of the dam face and cut and fill and compaction will be required. The Contractor stated that he used the earthwork estimate in the IFB and that the bid amount is a lump sum and not meant to be broken down into price per yard. They feel that they considered the necessary work and that the bid amount will be adequate.

Discussion followed concerning details of the earthwork. The Contractor asked about the drainage on top of the tailings ponds and removal of trees below the upper dam. The Engineer agreed that shooting several spots on the ponds to check for positive drainage would be appropriate. He stated that the trees on the dam face could not be salvaged and would have to be removed (not buried).

Riprap

Riprap source was then addressed. The Contractor stated that they plan to get most of the riprap onsite from the waste rock piles. The Engineer expressed concern over this because the nominal size must be met. A discussion of nominal size and the amounts of riprap required followed. Nominal size of Type 1 riprap is two feet, maximum size is ¼ cy and minimum size is $^{1}/_{10}$ cy. The purpose of the small size fraction is to fill the voids in the large nominal size riprap, and not as a replacement for the nominal size. The Contractor stated that they were confident that they could get the riprap onsite. The Engineer stated that they should be prepared to have and alternate source because the proper size was essential to the design. The Contractor expressed confidence in finding some if the onsite riprap source was inadequate.

PROPOSED WAGE RATES

Subsection (e) covers proposed wage rates. These were briefly discussed and the Contractor was referred to the section on Montana prevailing wage rates.

BIDDER STATUS

Subsection (f) relates to bidder status which was also briefly discussed. The Engineer stated that this was covered in the bid proposal.

SUBCONTRACTORS

Subsection (g) refers to approval of subcontractors. The Contractor stated that the fence would be subcontracted and that a Subcontractor Approval Form would be submitted to the Engineer.

UNBALANCED BID

Subsection (h) concerns unbalanced bids. The bid items considered unbalanced were discussed previously. The Engineer asked if the Contractor felt comfortable with the bid and the Contractor answered yes.

PROJECT CONTRACT PROTOCOL

A table outlining project contract protocol was distributed to those present at the meeting. The sections pertinent to pre-construction were discussed.

Notice of Award

The Notice of Award will be issued within 30 days of the bid opening. The estimated date of issue is July 25, 1991. This may be extended by mutual agreement.

Agreements

The Owner emphasized that the Agreements, Bonds and Certificate of Insurance must be returned to the Owner within 15 days of issue of the Notice of Award. If this is not done, the bond is forfeited by the Contractor and the next lowest bidder will be considered. The Owner will sign the Agreements within 10 days after they are returned.

Pre-Construction Submittals

The pre-construction submittals are due 10 days after the Agreement is signed.

Pre-Construction Conference

If the debris cleanup is scheduled to be completed separately from the rest of the work, two conferences will probably be scheduled; one prior to each phase of construction. The Pre-Construction meeting will be held in mid to late august.

Notice to Proceed

The Notice to Proceed may be issued at the Pre-Construction Conference and will be likely issued around August 10, 1991. The effective date of the Notice to Proceed will be the mutually agreed construction starting date.

PERMITS

The Owner explained that permits for coversoil and riprap should be obtained from the Hard Rock Bureau. Burning permits were discussed earlier.

SCHEDULE OF VALUES

The Engineer requested that the Contractor submit actual costs for separate tasks performed, especially each item salvaged from the mill building. The Owner explained that this was the first time that the AMRB has salvaged equipment and they anticipate doing it for future projects. The Engineer pointed out that this was not a demolition project, but a dismantling and disposal project.

LANDOWNER CONTACT

The Contractor asked how to deal with the landowner. The Engineer instructed the Contractor to contact the Engineer who will act as a liaison between the Landowner and the Contractor. This applies to any construction changes as well.

QUESTIONS AND COMMENTS

The Owner asked the Contractor to clarify several points made during the meeting.

The Contractor's intent is to use Best Management Practices for summer erosion control prior to seeding.

Signs will be provided by the Owner. Approximately three signs will be posted at the project site.

The topsoil and subsoil removed from areas within the project site will be salvaged and stockpiled in a location acceptable to the Engineer. If this is not done, then the Contractor is responsible for replacing what they did not salvage at no cost to the Owner. Removal and replacement of coversoil was not included in the bid items because it is an incidental item as are many other items under earthwork. There are no estimated quantities of salvageable coversoil; the number could range from 4 to 100 cubic yards.

The source of imported coversoil has not been determined by the Contractor; however, they have investigated several possibilities. The Contractor has sent several samples to Western Laboratories. The Contractor asked if blending soils to get the right chemical and physical characteristics would be acceptable. The Engineer expressed concern about doing this. This point is not addressed in the Technical Specifications; but, there is a problem with using soils with poor characteristics due to the salts already present in the tailings. The Contractor stated that the soil they were considering had alkali at 15 feet depth. The Engineer reiterated that the soil required is topsoil and subsoil and not a manufactured soil.

The Contractor asked if the calcium carbonate could be hauled to his personal property to be used as a soil amendment. The Engineer suggested that this may be possible but asked that this be submitted for approval prior to hauling it since the Engineer is considering other methods of disposal.

Finally, a discussion about the treatment of soil pH and salts occurred. The Owner pointed out that a source of topsoil from East Helena having high lead concentrations was available that would not be acceptable for the project.

NOTICE OF AWARD

TO: Shumaker Trucking & Excava.
P O Box 1442
Great Falls, MONTANA 59403

DATE: July 17, 1991
PROJECT: Golden Messenger
DSL-AMRB: 91-002

PROJECT DESCRIPTION: Provide all labor, materials, earthwork & incidentals to remove structures; excavate, place & haul mine spoils from one mine site; construct drainage channels; revegetate disturbed areas; fence; and perform general site cleanup.

The Owner has considered the Bid submitted by you for the above-described Work in response to its Invitation for Bid dated June 25, 1991 and Instructions to Bidders.

You are hereby notified that your bid has been accepted for items in the amount of $ 135,463.00.

You are required by the Instructions to Bidders to execute the Agreement and furnish the required Contractor's Performance Bond, Labor and Material Bond, and Certificates of Insurance within 15 calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bonds and Insurance within 15 days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your Bid as abandoned and as forfeiture of your Bid Bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated 17th day of July, 1991.

OWNER: DEPARTMENT OF STATE LANDS

By: Larry Marshall
Title: Bureau chief

ACCEPTANCE OF NOTICE OF AWARD

Receipt of the above Notice of Award is hereby acknowledged this 27 day of July, 1991.

CONTRACTOR: Shumaker Trucking & Excavating Contractors, Inc.

By:
Title: Eugene Shumaker, President

Rev. 3/91

AGREEMENT

STATE OF MONTANA
DEPARTMENT OF STATE LANDS

FORM OF AGREEMENT BETWEEN CONTRACTOR AND OWNER

This Agreement made on Aug 5, 1991 between Shumaker Trucking and Excavating Contractors, Inc., hereinafter called the "Contractor", and the STATE OF MONTANA, acting by and through the Commissioner DEPARTMENT OF STATE LANDS, hereinafter called the "Owner".

WITNESSETH, that the Contractor and the Owner for the consideration hereinafter named agree as follows:

ARTICLE 1. SCOPE OF WORK

The Contractor shall furnish all the materials and perform all of the work for the entire portion of the Contract as shown on the Drawings and described in the Specifications entitled Golden Messenger Project, Mont A/E or DSL-AMRB 91-002, and shall do everything required by the Contract Documents.

ARTICLE 2. TIME OF COMPLETION

The work to be performed under this Contract shall be commenced on or before a date set forth by the Owner in a written "Notice to Proceed" and shall be completed within 45 calendar days.

Liquidated damages are Four Hundred Dollars ($400.00) per calendar day.

ARTICLE 3. THE CONTRACT SUM

The Owner shall pay the Contractor for the performance of the Contract, subject to additions and deductions provided, in current funds as follows:

One hundred thirty five thousand, four hundred sixty three dollars and no cents----($135,463.00)

ARTICLE 4. PROGRESS PAYMENTS

The Owner shall make payments on account of the Contract as follows: 90% of the value, based on the Contract prices of labor and materials incorporated in the work and of materials suitably stored at the project site or at some other location agreed upon in writing, up to the last day of the month, less the aggregate of the previous payments.

ARTICLE 5. ACCEPTANCE AND FINAL PAYMENT

Final payment shall be due 30 days after completion and acceptance of the work, provided the work is fully completed and the Contract is fully performed. Upon receipt of written notice that the work is ready for final inspection and acceptance, the Owner shall promptly make his inspection(s); and when he finds the work acceptable under the Contract and the Contract fully performed, he shall promptly issue a Certificate of Acceptance, over his own signature, stating the work provided for in this Contract has been completed and is acceptable by him under its terms and conditions and that the entire balance found to be due the Contractor and noted in the final certificate is due and payable.

Before issuance of a final certificate, the Contractor shall submit evidence satisfactory to the Owner that all payrolls, materials bills, and other indebtedness connected with the work have been paid. If the work has been substantially completed and the Owner certifies that full completion thereof is materially delayed through no fault of the Contractor, the Owner shall, without terminating the Contract, make payment of the balance due for the portion of the work fully completed and accepted. Payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

ARTICLE 6. NO DAMAGES FOR DELAY - OTHER CONTRACTORS

It shall be the affirmative duty of each and every Contractor on the project to cooperate and coordinate the scheduling and progress of its work with that of all other Contractors. Under no circumstances shall the State of Montana be liable for any damages for delay caused by the acts or omissions of another Contractor, and each Contractor expressly consents to suit by other Contractors for each and every claim for delay by said Contractors performing work on the aforementioned project. It is further stipulated and agreed that the terms of this provision shall govern over any other Contract document as defined in Article 7, infra.

ARTICLE 7. THE CONTRACT DOCUMENTS

The Bid Documents, together with this Agreement, form the Contract; and they are as totally a part of the Contract as if hereto attached or herein repeated. The following is an enumeration of the Contract Documents:

> Invitation for Bid, Instructions to Bidders, Landowner/Contact List, Proposal, Bid Bond, Certification of Nonsegregated Facilities, Notice of Award, Agreement, Performance Bond, Labor and Material Bond, Insurance Certificates, Consent of Surety, Notice to Proceed, Work Directive Change, Change Order, Affidavit on Behalf of Contractor, Approval of Subcontractors, Substitution Request Form, Schedule of Values, Payment Request, Schedule of Materials, Contractor's Certificate of Completion, Certificate of Substantial Completion, Certificate of Acceptance, Standard Specifications for Abandoned Mine Reclamation Construction (General Conditions, Supplementary Conditions, Technical Specifications), Special Provisions, Drawings, and Wage Rates.

ARTICLE 8. STANDARD PREVAILING RATE OF WAGES AND PREFERENCE OF MONTANA LABOR

The Contractor and Subcontractors shall pay the current Montana Prevailing Wage Rates, including fringe benefits for health and welfare and pension contributions and travel allowance provisions in effect and applicable to the county or locality in which the work is being performed. These prevailing wage rates will be in accordance with the most current determination including applicable modifications and will be attached to the Specifications and are incorporated herein.

ARTICLE 9. VENUE

In the event of litigation concerning the Contract, venue shall be the First Judicial District in and for the County of Lewis and Clark, Montana, and the agreement shall be interpreted according to the laws of Montana.

WHEREOF the parties hereto have executed this Agreement, the day and year first above written.

STATE OF MONTANA
DEPARTMENT OF STATE LANDS
Owner

Commissioner

8-5-91
Date

Shumaker Trucking & Excavating
Contractors, Inc.
Contractor

Eugene Shumaker
(Signature)

Eugene Shumaker, President
(Typed/Printed Name and Title)

July 22, 1991
Date

NOTICE TO PROCEED

TO: Schumaker Trucking & Excavating
P O Box 1442
Great Falls, MONTANA 59403

DATE: September 10, 1991
PROJECT: Golden Messenger
MONT A/E or DSL-AMRB: 91-002

In accordance with the Agreement dated August 5, 1991, you are hereby notified to commence Work no later than September 16, 1991, and you are to complete the Work within 45 consecutive calendar days thereafter. The date of completion of all Work is, therefore, October 30, 1991.

OWNER: DEPARTMENT OF STATE LANDS

By:

Title: Bureau Chief Administrator

ACCEPTANCE OF NOTICE TO PROCEED

Receipt of the above Notice to Proceed is hereby acknowledged this 11th day of Sept., 1991.

CONTRACTOR: Shumaker Trucking and Excavating

By:

Title: Joseph G. Aline, Sec./Treas.

Rev. 3/91

MEETING SUMMARY
YORK MINING DISTRICT - PRE CONSTRUCTION CONFERENCE
SEPTEMBER 11,1991

A Pre Construction Conference for the Golden Messenger Mine, York Mining District Project was held at the Golden Messenger Mine on September 11, 1991 at 2:00 pm. An agenda and an attendance sheet are attached. In attendance were the following:

Robert Morton, Project Engineer, Robert Peccia and Associates
Nancy Granger, Site Inspector, Robert Peccia and Associates
Dale Herbort, Project Manager, DSL-Abandoned Mine Reclamation Bureau
Joe Aline, Supervisor, Shumaker Trucking & Excavation
Ken Carlstad, Construction Supervisor, Shumaker Trucking & Excavation

Robert Morton conducted the meeting. A conference agenda was handed out to all present and agenda items were covered as follows.

CONTRACTOR'S TENTATIVE SCHEDULE

The start date of the project will be September 16, 1991. The completion date will be 45 calendar days later, October 30, 1991. The work week will start out as five days per week, eight hours per day. The contractor may switch to a four day, 10 hour schedule. This will be acceptable with prior notification to the Engineer.

CONTRACTORS SUBMITTALS

Traffic Plan

Specifications for a Traffic Plan are covered in the Supplementary Conditions of the Standard Specifications. It is applicable when hauling materials.

Certifications

Certifications are required for seed, fertilizer and mulch. The Contractor is familiar with this requirement. They will probably be hydromulching any slopes over 3:1, all other areas will be straw mulched. Use of straw mulch on steeper slopes will be considered through the submittal/substitution process.

Other Technical Specifications

The Project Engineer pointed out the other Technical Specifications which are listed in the Bid Document. He reminded the Contractor that they are responsible for complying with those listed.

Substitutions

Substitution Request Forms submitted to date were discussed. These include substitution of diagonal fence panels for double fence panels. The Substitution will be approved but the Project Engineer stated that there may be problems with the fence due to vandalism and that the fence panels must be sturdy enough to hold. The Contractor shall be responsible for this under the project warranty and he acknowledged that this is no problem and that he commonly repairs fence, sometimes up to two years later after installation. Other Substitution Request forms submitted are for the Erosion Control Mat (ECM) and the Bank Stabilization Fabric (BSF). The Site Inspector stated that the ECM request would be returned not accepted, the BSF substitution looks acceptable.

APPLICATIONS FOR PAYMENT

The Contractor is familiar with required procedures since they have been involved in reclamation projects in the past. The agenda items were quickly reviewed including payment for materials on site.

SPECIFIC DSL REQUIREMENTS AND PROCEDURES

Inspections

Interim inspections will be carried out by both the Project Manager and the Project Engineer. The Project Manager expects to be on site at least twice per week, especially during the dismantling of the mill building. The Project Engineer expects to visit the site once per week.

Safety

The Project Engineer pointed out that neither the Project Manager nor the Inspector are safety experts and reminded the Contractor that they are responsible for following proper safety procedures.

Payrolls

The Contractor will send certified payrolls in to the Engineer once per week.

CRITICAL WORK SEQUENCING

Submittals

Numerous submittals are required and should be sent and returned in favorable status prior to ordering of materials.

Liming, Topsoiling and Seeding

No liming will be done at this point. The pH of the soil will be checked by the Inspector to verify this once grading has been completed. The Project Engineer reviewed the sequence of straw amendment with nitrogen fertilizer, cover soil, and seeding. The organic matter of the cover soil is very important at this site due to the condition of the soils (high salts). The minimum required is 1% organic matter. The Engineer also reminded the Contractor that a mining permit may be required for the removal of cover soil or riprap and that obtaining the permit, if the Landowner does not have one, is the responsibility of the Contractor.

FIELD DECISIONS, WORK DIRECTIVES AND CHANGE ORDERS

The Project Engineer explained the difference between the work directives and change orders. Work directives are approved prior to work performed and can be included in a change order.

Trees

Trees are not to be removed or damaged unless they impede work progress and removal is approved by the Site Inspector.

USE OF PREMISES, STORAGE AREAS, SECURITY AND FIELD OFFICE

Security

Site security may be a problem due to the high incidence of public trespass on this site. Site security is the responsibility of the contractor and AMRB will supply reclamation work in progress

signs. The police patrol the York road occasionally due to the reports of parties in the area. The Contractor asked if a gate might be erected on the road to keep people off the site. The Engineer suggested that he contact the Forest Service for approval. Local residents will probably be visiting the site frequently. The Site Inspector will deal with their questions. The Contractor may request that people move if they are impeding work progress. If there are any problems, the Project Manager should be contacted.

CONTRACTOR'S ASSIGNMENTS FOR SAFETY AND FIRST AID

The Engineer again reminded the Contractor that they are responsible for safety. This responsibility may include signs posted with OSHA safety regulations for all employees to read, complete and up to date files, steel toed boots, safety glasses and hard hats. Dust should be kept down by watering.

PROGRESS MEETINGS

A progress meeting will be held at the time the first pay request is submitted. Meetings will also be held at any time it is deemed necessary.

INSPECTION AND TESTING

The Contractor is responsible for all necessary testing except in place density and pH tests which will be performed by the Site Inspector, if necessary.

COMMENTS

Change Orders

The Engineer informed the Contractor that a work directive change or change order will probably be issued to remove and salvage two additional pieces of equipment: the jaw crusher and the cone crusher. The Contractor requested that he be notified within the next week if the Change Order will be issued since it will affect the dismantling of the mill building.

Permits

The Contractor is responsible for obtaining all necessary permits. This includes permits for removal of cover soil and for riprap, if obtained off site.

Removal of Mill Equipment

The Project Manager requested that the Contractor notify him two days in advance of when he is scheduled to remove the flotation separator, the steam engine and the two crushers, if removed. The Contractor plans on preparing for removal of the flotation separator on Monday, September 16th.

Land Ownership

The Contractor asked about land ownership on the project site. The mill building and the land surrounding it is owned by Mrs. Joseph Virag. The south half of the upper tailings pond to York Road is Forest Service property. The Forest Service has a closure around this area which restricts vehicular travel; However, it does not appear to be actively enforced. The Forrest Service has granted road use authorization for this project. If problems arise, the Contractor should call the Forest Service to report trespassing. The Project Manager will provide signs to post stating that reclamation work is in progress.

Adit Closures

The Contractor asked about the adit closures required. One adit will be backfilled, the other will have a culvert closure installed. The Contractor believes that the adit will be backfilled by hand but they may consider blasting. They may also consider blasting the concrete foundations of the mill building. The Engineer reminded the Contractor that if blasting is done, they will be required to provide such items as a blasting plan and a licensed blaster, as part of the required submittal items noted in the Supplementary Conditions of the Standard Specifications.

CONCLUSION

The attenders drove over to the mill building and discussed methods of removing the flotation separator. The two crushers were also pointed out to the Contractor and the Site Inspector. Dismantling of the mill building was also discussed.

A Notice to Proceed was signed by and distributed to the Department and the Contractor.

CERTIFICATE OF SUBSTANTIAL COMPLETION

TO: Department of State Lands, Abandoned Mine Reclamation Bureau

PROJECT TITLE: Golden Messenger Mine, York Mining District

MONT A/E or DSL-AMRB: 91-002
CONTRACT DATE: 7/27/91
LOCATION: Golden Messenger Mine
York, MT
PROJECT OR PART SHALL INCLUDE: All

CONTRACTOR: Shumaker Truck & Excav.
ADDRESS: P.O. Box 1442
Great Falls, MT 59403
TELEPHONE NO: (406) 727-3537

SUBSTANTIAL COMPLETION DATE: 11/8/91
DSL INSPECTION DATE: 11/11/91
ENGINEER: Robert Peccia & Associates
825 Custer Ave, Helen, MT 59601
PERFORMANCE BOND NO: B140405
DATE OF BOND: 7/17/91
SURETY: MCA
MONTANA AGENT: Cogswell Agency
ADDRESS: P.O. Box 2009,
Great Falls, MT 59403

The Work performed under this Contract has been inspected by authorized representatives of the Owner, Contractor, and Engineer, and the Project (or specified part of the Project, as indicated above) is hereby declared to be substantially completed on the above date.

DEFINITION OF SUBSTANTIAL COMPLETION

The date of substantial completion of a project or specified area of a project is the date when the construction is sufficiently completed, in accordance with the contract documents, as modified by any change orders agreed to by the parties, so the Owner can occupy or utilize the project or specified area of the project for the use for which it was intended.

A tentative list of items to be completed is appended hereto. This list may not be exhaustive, and the failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents.

ENGINEER: ROBERT PECCIA & ASSOC

By Robert B Morton 11/25/91
Authorized Representative Date

The Contractor accepts the above Certificate of Substantial Completion and agrees to complete and correct the items on the tentative list within the time indicated.

CONTRACTOR: Shumaker Trucking & Excavating Contractors, Inc.

By 11/18/91
Authorized Representative Date

The Owner accepts the Project or specified area of the Project as substantially complete and will assume full possession of the project or specified area at ________ (time), on ______________ (date). The responsibility for heat, utilities, security, and insurance under the Contract Documents shall be as set forth under "Remarks" below.

OWNER: ______________________

By Edward [illegible] 11-27-91 H
Authorized Representative Date

Remarks: (Attach additional sheet, if necessary)

Rev. 3/91

MEETING SUMMARY
YORK MINING DISTRICT - FINAL INSPECTION
NOVEMBER 7, 1991

A Final Inspection for the Golden Messenger Mine, York Mining District Project was held at the Golden Messenger Mine on November 7, 1991 at 2:00 pm. In attendance were the following:

Robert Morton, Project Engineer, Robert Peccia and Associates
Nancy Granger, Site Inspector, Robert Peccia and Associates
Dale Herbort, Project Manager, DSL-Abandoned Mine Reclamation Bureau
Joe Aline, Supervisor, Shumaker Trucking & Excavation
Ken Carlstad, Construction Supervisor, Shumaker Trucking & Excavation

Items discussed included punch list items for completion of the project, warranty items and a deduction for salvage of the flotation separator.

PUNCH LIST ITEMS

1. Staples in the Erosion Control Mat were found to be protruding from the mat. The Contractor was asked to recheck the staples along the length of both channels. This item along with the other components of the mat-lined channel will be a warranty item.

2. Areas which still need to be fertilized included the haul road and waste rock pile #1. The Contractor was asked to finish these areas.

3. Reclamation in Progress signs will be left up for at least the next year. The signs should be securely attached to posts at the southern access near York Road and at the northern access on Forest Service Road 4141.

4. The staging area where the trailers and some equipment were stored was disturbed during demobilization. Established grass was dislodged and seeded areas were disturbed. The Contractor was asked to regrade, reseed and fertilize the disturbed area.

5. The three fence gates were found to be easily opened even when locked by sliding the latch over the fence post. The Contractor was asked to place nails in each gate post so that the latch could not be raised over the post without unlocking it.

6. A lock for the culvert gate on adit #2 is to be provided by the Contractor. The Engineer ordered a lock and will send the Contractor an invoice. The Engineer will place the lock on the gate when it comes in.

WARRANTY ITEMS

Items which will be subject to warranty inspection and contractor repair under warranty were discussed and include, but are not limited to, the following:

- The erosion control mat, key trenches, and staples. As determined by the Engineer, staples will be replaced, key trenches regraded and backfilled and any damaged or dislodged mat replaced.

- Subsidence. Any areas where backfilling and/or burying was done which shows signs of subsidence will be reshaped and reclaimed.

- Weeds. Weed control during the warranty period is the responsibility of the Contractor.

- Erosion, Mulch and Seeding. Eroded slopes and areas with insufficient seedling establishment will be reclaimed, including grading, seedbed preparation, fertilizing, seeding and mulching.

- Burn pit hot spots. Areas where debris was burned and buried were clear of snow indicating that the areas are still warm. Any detrimental effects will be reclaimed.

- The steep access road side-cut adjacent to the lower tailings pond area was not discussed at the meeting but was noticed afterward. Should this potentially unstable slope erode or slump into the road, the contractor shall be responsible for the road and slope repair and reclamation. This situation was discussed and agreed to by the Contractor on November 14, 1991.

DEDUCTION FOR SALVAGE OF FLOTATION SEPARATOR

The salvage of the flotation separator was discussed by the Superintendent, the Site Inspector and the Project Manager. During the final stage of salvage of the flotation separator, the metal hopper under the separator was detached and damaged. The Contractor understood that the Project Manager considered the hopper as part of the separator. The Superintendent did not believe that the specifications included the hopper. The Project Manager intended to deduct one-third the cost of salvage less transportation ($580.00) from the price of salvaging the separator. The Superintendent pointed out that the Project Manager did not give the Contractor a chance to repair the hopper and recoup some loss on the salvage. The Project Manager agreed to deduct only $400.00.

RECEIVED
NOV 20 1991
STATE LANDS

CERTIFICATE OF ACCEPTANCE

TO: Department of State Lands, Abandoned Mine Reclamation Bureau OWNER

PROJECT TITLE: Golden Messenger Mine, York Mining District

MONT A/E or DSL-AMRB: 91-002
CONTRACT DATE: 7/27/91
LOCATION: Golden Messenger Mine

PROJECT OR PART SHALL INCLUDE: All

CONTRACTOR: Shumaker Truck & Excav.
ADDRESS: PO Box 1442
Great Falls, MT 59403
TELEPHONE NO: (406) 727-3537

FINAL ACCEPTANCE DATE: 11/18/91
DSL INSPECTION DATE: 11/11/91
ENGINEER: Robert Peccia & Associates

PERFORMANCE BOND NO: B140405
DATE OF BOND: 7/17/91
SURETY: MCA
MONTANA AGENT: Cogswell Agency

ADDRESS: PO Box 2009
Great Falls, MT 59403

The Work performed under this Contract has been inspected by authorized representatives of the Owner, Contractor, and Engineer, and the Project (or specified part of the Project, as indicated above) is hereby declared to be totally completed and accepted on the above date.

ENGINEER: Robert Peccia & Associates

By Robert B Morton 11/25/91
Authorized Representative Date

The Contractor accepts the above Certificate of Acceptance and agrees to abide by the conditions of the one-year warranty period which began on the substantial completion date.

CONTRACTOR: Shumaker Trucking & Excavating Inc.

By 11/19/91
Authorized Representative Date

The Owner accepts the Project as totally complete, and final payment is due to the Contractor as provided in the contract documents.

OWNER: Department of State Lands, AMRB

By Edward 11-22-91 DH
Authorized Representative Date

Rev. 3/91

ATTACHMENT B

Change Orders and Work Directives

WORK DIRECTIVE CHANGE

(Instructions on Reverse Side)

No. 1

PROJECT: Golden Messenger Mine
York Mining District

DATE OF ISSUANCE: 09/17/91

CONTRACTOR:
(Name, Address)
Shumaker Trucking &
Excavating Contractors, Inc.
P. O. Box 1442
Great Falls, MT 59403

OWNER: Department of State Lands
Abandoned Mine Reclamation Bureau

MONT A/E or DSL-AMRB: 91-002

CONTRACT FOR: Base Bid

ENGINEER: Robert Peccia & Associates, Inc.

You are directed to proceed promptly with the following change(s):

Description: Bid item 4 and special provision 3.15, Salvage Mill Equipment. Delete salvage of one of the drum floatation separators to go to the Butte Mining Museum. Add salvage of cone crusher and jaw crusher to unload at MT Historical Society, Helena storage area.

Purpose of Work Directive Change: Solidify cost for change order. Butte Mining Museum no longer desires drum floatation separator. Montana Historical Society desires cone crusher and jaw crusher.

Attachments: (list documents supporting change)

If a claim is made that the above change(s) have affected Contract Price or Contract Time, any claim for a Change Order based thereon will involve one of the following methods of determining the effect of the change(s).

Method of determining change in Contract Price:

☐ Time and Materials
☐ Unit Prices
☐ Cost Plus Fixed Fee
☒ Other prior agreement

Estimated increase ~~(decrease)~~ in Contract Price: $ 0.00 . If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Method of determining change in Contract Time:

☐ Contractor's Records
☒ Engineer's Records
☐ Other ____________

Estimated increase ~~(decrease)~~ in Contract Time: 0 days. If the change involves an increase, the estimated time is not to be exceeded without further authorization.

Robert Peccia & Associates, Inc.
RECOMMENDED:
By: Robert B Horton 9/18/91
Engineer

DSL-Abandoned Mine Reclamation Bureau
AUTHORIZED:
By Sept 23, 1991
Owner

ACCEPTED: Shumaker Trucking & Excavating Contractors, Inc.
By:
Contractor

WORK DIRECTIVE CHANGE

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work which, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Time. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a change in the Contract Price or the Contract Time, a Field Order may be issued.

B. COMPLETING THE WORK DIRECTIVE CHANGE

Engineer initiates the form, including a description of the items involved and attachments.

Based on conversations between Engineer and Contractor, Engineer completes the following:

> METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT PRICE: Mark the method to be used in determining the final cost of Work involved and the net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or changed work is completed, another Work Directive Change must be issued to change the time or Contractor may stop the changed Work when the estimated time is reached. If the Work Directive Change is not likely to change the Contract Price, the space for estimated increase (decreased) should be marked "Not Applicable".
>
> METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT TIME: Mark the method to be used in determining the change in Contract Time and the estimated increase or decrease in Contract Time. If the change involves and increase in the Contract Time and the estimated time is approached before additional or changed Work is completed, another Work Directive Change must be issued to change the time or Contractor may stop the changed Work when the estimated time is reached. If the Work Directive Change is not likely to change the Contract Time, the space for estimated increase (decrease) should be marked "Not Applicable".

Once Engineer has completed and signed the form, all copies should be sent to Owner for authorization because Engineer alone does not have authority to authorize changes in Price or time. Once authorized by Owner, a copy should be sent by Engineer to Contractor.

Once the Work covered by this directive is completed for final cost and time determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR THE CONTRACT TIME. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

CHANGE ORDER

ORDER NO. 1

PROJECT TITLE: Golden Messenger Mine - York Mining District

MONT A/E or DSL-AMRB: 91-002

CONTRACT DATE: September 16, 1991

OWNER: Department of State Lands, Abandoned Mine Reclamation Bureau

CONTRACTOR: Shumaker Trucking and Excavating Contractors, Inc.

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.)

ITEM NO.	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES					TOTAL COST
		MAT'LS.	LABOR	EQUIP.	MISC.	TOTAL UNIT COST	
1.	Increase in quantity, Bid Item 7 Straw Amendment, 7 AC increased to 7.8 AC (0.8 AC)					$500.00	$400.00
2.	Increase in quantity, Bid Item 8, Import Cover Soil, 3,500 CY increased to 3,888 CY (388 CY)					$10.50	$4,074.00
3.	Increase in quantity, bid Item 9, Fertilize and Seed, 9 AC increased to 9.3 AC (0.3 AC)					$200.00	$60.00
4.	Decrease in quantity, Bid Item 10, Mulch, 9 AC decreased to 8.8 AC (0.2 AC)					$500.00	($100.00)
5.	Decrease in quantity, Bid Item 11, Farm Fence (Type F-4M), 4,380 LF decreased to 4,120 LF (260 LF)					$1.75	($455.00)
6.	Increase in quantity, Bid Item 12, Farm Fence Gate, 16', 2 EA increased to 3 EA (1 EA)					$100.00	$100.00
7.	Decrease in quantity, Bid Item 13, Erosion Control Mat, 2,800 SY decreased to 2,510 SY (290 SY)					$6.50	($1,885.00)
	SEE ATTACHED SHEET FOR ADDITIONAL ITEMS						
	TOTAL COST - MATERIALS, LABOR, EQUIPMENT & MISC.						$10,264.00
	OVERHEAD & PROFIT @ ____%						N/A
	GRAND TOTAL - THIS CHANGE ORDER						$10,264.00

Original Contract Price	$135,463.00
Current Contract Price Adjusted by Previous Change Order	$135,463.00
Cost this Change Order (+ or -_)	+ $10,264.00
New Contract Price including this Change Order	$145,727.00

ITEM NO.	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES					TOTAL COST
		MAT'LS.	LABOR	EQUIP.	MISC.	TOTAL UNIT COST	
8.	Increase in quantity, Bid Item 14, Riprap - Type 1, 1,015 CY increased to 1,789 CY (774 CY)					$10.00	$7,740.00
9.	Increase in quantity, Bid Item 15, Riprap - Type 3, 15 CY increased to 22 CY (7 CY)					$30.00	$210.00
10.	Increase in quantity, Bid Item 16, Riprap - Type 5, 400 CY increased to 464 CY (64 CY)					$20.00	$1280.00
11.	Increase in quantity, Bid Item 17, Bank Stabilization Fabric, 2,074 SY increased to 2,782 SY (708 SY)					$2.00	$1,416.00
12.	Decrease in quantity, Bid Item 18, Lime Application, 1 AC decreased to 0 AC (1 AC)					$1500.0	($1500.00)
13.	Bid Item 11, Farm Fence, decrease in price for corner panels						($676.00)
14.	Increase Contract Time by 5 days					N/A	N/A
15.	Change lime disposal to haul lime off site, Page SP-2, sec. 3.4, ¶ 9 and Plan Sheet 3 of 4					N/A	N/A
16.	Delete salvage of one drum flotation separator and add salvage of cone crusher and jaw crusher, Bid Item 4 and Special Provision 3.15.					N/A	N/A
17.	Deduct for failure to salvage entire flotation separator, Bid Item 4						($400.00)

TOTAL COST - MATERIALS, LABOR, EQUIPMENT & MISC.	
OVERHEAD & PROFIT @ _____%	
GRAND TOTAL - THIS CHANGE ORDER	See Page CO - 1

The completion date as set forth in the Contract Documents shall be (~~unchanged~~, increased, ~~decreased~~) by 5 calendar days.

The date for completion of all work will be November 5, 1991.

Description and Justification for Change:

1. Change Order Items 1 - 12 adjust bid quantities to reflect actual field measured quantities.
2. Change Order Item 13 adjusts contract amount to incorporate substitution of diagonal double and single fence panels (See Substitution Request Form signed 9/23/91).
3. Change Order Item 14 increases contract time by five (5) days due to the increase in quantities.
4. Change Order Item 15 allows contractor to haul lime off-site for use as a soil amendment rather then dispose of lime per Substitution Request signed 10/09/91.
5. Change Order Item 16 per Work Directive Change No. 1 substitutes salvage of one drum flotation separator for salvage of cone and jaw crushers to be hauled to Lewis and Clark County fairgrounds.
6. Change Order Item 17 deducts $400.00 fro failure to salvage the metal hopper which was attached to the small fotation separator.

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The Principal and the Surety further agree that on or after execution of this consent, the penalty of the applicable Performance Bonds or Bonds is hereby increased by $ 10,264.00 (100% of the Change Order amount) and the penalty of the applicable Labor and Material Bond or Bonds is hereby increased by $ 10,264.00 (100% of the Change Order amount).

COUNTERSIGNED BY MONTANA RESIDENT AGENT	SURETY
	MCA Insurance Company
	By:
	Seal

Recommended by: Robert L. Morton, Robert Peccia & Assoc. 11/25/91
Engineer Date

Accepted by: 11/19/91
Contractor Date

Approved by: 11-27-91 DH
Owner Date

MCA Insurance Company
484 Central Avenue
Newark, NJ 07107

POWER OF ATTORNEY

No. 25B140

KNOW ALL MEN BY THESE PRESENTS that MCA Insurance Company, an Oklahoma corporation authorized to engage in business as a surety, does hereby appoint E. B. Cogswell, E. B. Cogswell, Jr., and Lorrin A. Darby, of Great Falls, Montana its true and lawful Attorney(s)-in-Fact, to execute on its behalf any and all bonds and undertakings not in excess of Two Million Five Hundred Thousand Dollars ($2,500,000) and consents for the release of retained percentages and/or final estimates and to bind the Company thereby.

This Power of Attorney is executed, and may be certified to and may be revoked, pursuant to and by authority of a Resolution adopted by the Board of Directors of MCA Insurance Company at a meeting called and held on the 13th day of July, 1987, of which the following is a true transcript:

> "RESOLVED, that the Chairman of the Board, the President, any Executive Vice President or Senior Vice President or Vice President - Surety be, and hereby is, authorized to appoint Attorneys-in-Fact to represent and act for and on behalf of the Company to execute bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, and to attach thereto the corporate seal of the Company, in the transaction of its surety business;
>
> "RESOLVED, that the signatures and attestations of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company when so affixed with respect to any bond, undertaking, recognizance or other contract of indemnity or writing obligatory in the nature thereof;
>
> "RESOLVED, that any such Attorney-in-Fact delivering a secretarial certification that the foregoing resolutions still be in effect may insert in such certification the date thereof, said date to be not later than the date of delivery thereof by such Attorney-in-Fact."

IN WITNESS WHEREOF MCA Insurance Company has caused these presents to be signed by one of its officers, and its corporate seal to be hereunto affixed this 27th day of June, 1990.

1978

MCA INSURANCE COMPANY

by
Soren N. S. Laursen, Vice President - Surety

State of New Jersey:
County of Bergen:

On this 27th day of June , 19 90, before me came Soren N. S. Laursen, to me personally known, and, being by me duly sworn, said that he is Vice President - Surety of MCA Insurance Company; that the seal affixed to said instrument is the corporate seal of said corporation; that the corporate seal and his signature were duly affixed by order of the Board of Directors of said corporation.

Eva Friedman
Eva Friedman, Notary Public of New Jersey
My Commission expires Sept. 25, 1994

CERTIFICATE

I, Doris Greeley, Secretary of MCA Insurance Company, do hereby certify that the foregoing Resolution adopted by the Board of Directors of this corporation, and the Power of Attorney issued pursuant thereto, are true and correct, and that both the Resolution and the Power of Attorney are in full force and effect.

IN WITNESS WHEREOF I have hereunto set my hand affixed the facsimile seal of the corporation

this 19th day of November , 19 91 .

Doris Greeley
Secretary

B22 6/90

1978

ATTACHMENT C

Pay Requests

RECEIVED
OCT 23 1991
STATE LANDS

RECEIVED
OCT 30 1991
ROBERT PECCIA
& ASSOCIATES

RECEIVED
OCT 17 1991
ROBERT PECCIA
& ASSOCIATES

PAYMENT REQUEST NO. One

FROM 9/15/91 TO 10/15/91

PROJECT TITLE: Golden Messenger Mine Reclamation Project

LOCATION: York, MT MONT A/E or DSL-AMRB: 91-002

NAME OF CONTRACTOR: Shumaker Trucking & Excavating Contractors, Inc.

ADDRESS: P.O. Box 1442 Great Falls, MT 59403

SUMMARY OF PROJECT STATUS

Amount of Original Contract		$ 135,463.00
Change Order No. ____	$	
Change Order No. ____	$	
Change Order No. ____	$	
Amount of Approved Change Order(s)		$ -0-
TOTAL CONTRACT AMOUNT		$ 135,463.00

Pay Request No.	Amount of Request
One	$~~110,899.00~~ 99 309.10

Total Contract Amount Completed to Date	$110,899.00
Less Retainage (10 ~~0~~ %)	$ -0- 239 90
TOTAL AMOUNT EARNED TO DATE	$~~110,899.00~~ 99,309 10
Less Previous Payments	$ -0-
AMOUNT DUE THIS PAYMENT	$~~110,899.00~~ 99,309 10
Less 1% Tax	$ ~~1,108.99~~ 998 09
TOTAL DUE CONTRACTOR	$~~109,790.01~~ 98,311 01

RBM
10/22/91

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

Shumaker Trucking & Excavating
Contractor

By

Date October 16, 1991

APPROVED BY:

Dept. of State Lands, Abandoned Mine Reclamation Bureau
Owner

By Edward O. Bensl

Date Oct 23, 1991

DH
10/25/91

RECOMMENDED BY:

ROBERT PECCIA & ASSOC.
Engineer

By Robert B Morton

Date 10/22/91

Item No.	Description	Contract Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed to Date	Amount Due this Payment
1.	Mobilization	L.S.	5,000.00	-0-	100%	100%	5,000.00	5,000.00
2.	Site Access	L.S.	5,000.00	-0-	90 ~~100%~~	90%	4,500.00	4,500.00
3.	Debris Cleanup	L.S.	500.00	-0-	100%	100%	500.00	500.00
4.	Salvage Mill Equip	L.S.	20,000.00	-0-	75%	75%	15,000.00	15,000.00
5.	Site Earthwork	L.S.	5,100.00	-0-	85%	85%	4,335.00	4,335.00
6.	Close Mine Openings	2	1,500.00	-0-	2 EA.	2 EA.	3,000.00	3,000.00
7.	Straw Amendment	7 AC.	500.00	-0-	6 AC.	6 AC.	3,000.00	3,000.00
8.	Import Cover Soil	3500C.Y.	10.50	-0-	3,000 CY	3,000 CY	31,500.00	31,500.00
9.	Fert. & Seed	9 AC.	200.00	-0-	-0-	-0-	-0-	-0-
10.	Mulch	9 AC.	500.00	-0-	-0-	-0-	-0-	-0-
11.	Farm Fence F4M	4,380'	1.75	-0-	1,000 FT	1,000 FT	1,750.00	1,750.00
12.	Farm Fence Gate	2	100.00	-0-	-0-	-0-	-0-	-0-
13.	Erosion Control Mat	2800SY	6.50	-0-	-0-	-0-	-0-	-0-
14.	Rip Rap Type I	1015 CY	10.00	-0-	1,610 CY	1,610 CY	16,100.00	16,100.00
15.	Rip Rap Type III	15 CY	30.00	-0-	-0-	-0-	-0-	-0-
16.	Rip Rap Type V	400 CY	20.00	-0-	420 CY	420 CY	8,400.00	8,400.00
17.	Bank Stab. Fabric	2074 SY	2.00	-0-	2,782 SY	2,782 SY	5,564.00	5,564.00
18.	Lime	1 AC.	1,500.00	-0-	-0-	-0-	-0-	-0-
								98,649.00
	Materials on Site (Attach Schedule)	–	–	$	$	——>	$	$12,250.00
TOTAL							$	$110,899.00

SCHEDULE OF MATERIAL ON SITE

PROJECT TITLE: GOLDEN MESSENGER MINE RECLAMATION PROJECT

MONT A/E or DSL-AMRB: 91-002

CONTRACTOR: SHUMAKER TRUCKING & EXCAVATING CONTRACTORS, INC.

Item 13.	Material Delivered	EROSION CONTROL MAT (PEC MAT)	
	Material in Place	-0-	
	Material on Site		$12,250.00
Item ___	Material Delivered		
	Material in Place		
	Material on Site		
Item ___	Material Delivered		
	Material in Place		
	Material on Site		
Item ___	Material Delivered		
	Material in Place		
	Material on Site		
Item ___	Material Delivered		
	Material in Place		
	Material on Site		
Item ___	Material Delivered		
	Material in Place		
	Material on Site		
Item ___	Material Delivered		
	Material in Place		
	Material on Site		
	TOTAL MATERIAL ON SITE (Attach applicable invoices or bills of lading.)		$12,250.00

Requested by: SHUMAKER TRUCKING & EXCAVATING CONTRACTORS, INC.
Contractor

To be included in Payment Request No. ONE.

Note: Provide invoice.

ROSCOE STEEL
& CULVERT COMPANY

A MONTANA CORPORATION ID #81-0244976
2847 HESPER RD. • BILLINGS, MT 59102
PHONE (406) 656-2253 • FAX (406) 656-8576

INVOICE

[illegible]14	10/[illegible]/91

PARTIAL

[illegible]	ORDER DATE	DUE DATE	CUSTOMER NO.	P.O. NUMBER	[illegible]	SHIPPING POINT	[illegible]	[illegible]
28780	9/13/91	9/20/91	0037600	JOE	[illegible]	JOBSITE		NET 30 DAYS

SHUMAKER TRUCKING
P.O. BOX 1442
GREAT FALLS MT 59403

SHIP TO

SHUMAKER TRUCKING
P.O. BOX 14
GREAT FALLS MT [illegible]

[illegible]	[illegible]	DESCRIPTION	TOT LENGTH	[illegible]	[illegible]
28		GREENSTREAK PECMAT 6' X 150'		430.00	12,040.00
5		9X2X9 STAPLES 500 PER BOX		ck 4[illegible]	210.00
		ADIT GATE ASSEMBLY--AS PER DWG		ck 500.00	500.00
1	24.0	HELICAL CSP 48" 16GA STD	24.0	ck [illegible]	[illegible]
1		BIT COAT OUTSIDE ONLY			

1039-8300

REMARKS

[illegible]	[illegible]	[illegible]	[illegible]
	MT		3268

TOTAL DUE [illegible]

PAST DUE ACCOUNTS BEAR INTEREST AT 18% ANNUALLY

PAYMENT REQUEST NO. 2 - Final

FROM 10/16/91 TO 10/30/91

PROJECT TITLE: Golden Messenger Mine Reclamation Project

LOCATION: York, MT MONT A/E or DSL-AMRB: 91-002

NAME OF CONTRACTOR: Shumaker Trucking and Excavating Contractors, Inc.

ADDRESS: P.O. box 1442 Great Falls, MT 59403

SUMMARY OF PROJECT STATUS

Amount of Original Contract		$ 135,463.00
Change Order No. 1	$ 10,264.00	
Change Order No. ____	$	
Change Order No. ____	$	
Amount of Approved Change Order(s)		$ 10,264.00
TOTAL CONTRACT AMOUNT		$ 145,727.00

Pay Request No.	Amount of Request
One	$99,809.10
Two	$45,917.90

Total Contract Amount Completed to Date	$ 145,727.00
Less Retainage (0 %)	$ 0.00
TOTAL AMOUNT EARNED TO DATE	$ 145,727.00
Less Previous Payments	$ 99,809.10
AMOUNT DUE THIS PAYMENT	$ 45,917.90
Less 1% Tax	$ 459.18
TOTAL DUE CONTRACTOR	$ 45,458.72

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

Shumaker Trucking and Excavating
Contractor

By

Date November 19, 1991

RECOMMENDED BY:

Robert Peccia & Associates
Engineer

By Robert B Morton

Date 11/25/91

APPROVED BY:

Dept. of State Lands, Abandoned Mine Reclamation Bureau
Owner

By Edward C. [illegible]

DH

Date 11-27-91

Item No.	Description	Contract Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed to Date	Amount Due this Payment
1.	Mobilization	L.S.	$5,000.00	100%	0%	100%	$5,000.00	$ 0.00
2.	Site Access	L.S.	5,000.00	90%	10%	100%	5,000.00	500.00
3.	Debris Clean-up	L.S.	500.00	100%	0%	100%	500.00	0.00
4.	Salvage Mill Equipment	L.S.	20,000.00	75%	25%	100%	19,600.00*	4,600.00
5.	Site Earthwork	L.S.	5,100.00	85%	15%	100%	5,100.00	765.00
6.	Close Mine Openings	2 Ea.	1,500.00	2	0	2 Ea.	3,000.00	0.00
7.	Straw Amendment	7 Ac.	500.00	6	1.8	7.8 Ac.	3,900.00	900.00
8.	Import Cover Soil	3500 cy	10.50	3000	888	3888 cy	40,824.00	9,324.00
9.	Fertilize and Seed	9 Ac.	200.00	0	9.3	9.3 Ac.	1,860.00	1,860.00
10.	Mulch	9 Ac.	500.00	0	8.8	8.8 Ac.	4,400.00	4,400.00
11.	Farm Fence (F-4M)	4380 ft	1.75	1000	3120	4120 ft	6,534.00*	4,784.00
12.	Farm Fence Gate	2 Ea.	100.00	0	3	3 Ea.	300.00	300.00
13.	Erosion Control Mat	2800 sy	6.50	0	2510	2510 sy	16,315.00	16,315.00
14.	Rip Rap Type 1	1015 cy	10.00	1610	179	1789 cy	17,890.00	1,790.00
15.	Rip Rap Type 3	15 cy	30.00	0	22	22 cy	660.00	660.00
16.	Rip Rap type 5	400 cy	20.00	420	44	464 cy	9,280.00	880.00
17.	Bank Stabilization Fabric	2074 sy	2.00	2782	0	2782 sy	5,564.00	0.00
18.	Lime	1 Ac.	1,500.00	0	0	0 Ac.	0.00	0.00
	*** See Change Order No. 1**							
	Materials on Site (Attach Schedule)	--	--	$12250.00	$	———— >		
TOTAL							($12,500.00)	$ 34,828.00

ATTACHMENT D

Analysis of Consultant Costs Incurred

Analysis of Consultant Costs Incurred
For The Montana Department of State Lands
Abandoned Mine Reclamation Bureau
AMR Project Number: DSL-AMRB 91-002
GOLDEN MESSENGER MINE YORK MINING DISTRICT

RPA PROJECT NUMBERS:
91-30.23
90-30.23
89-30.15
88-30.15

Engineering Service	RPA Project Number	Amount
Design Engineering:		
1991 Contract	91-30.23	$0.00
1990 Contract	90-30.23	$47,282.34
1989 Contract	89-30.15	$899.44
1988 Contract	88-30.15	$2,783.84
Subtotal Design Engineering Cost:		$50,965.62
Construction Engineering and Project Administration Cost:		
1991 Contract	91-30.23	$22,109.64
1990 Contract	90-30.23	$0.00
1989 Contract	89-30.15	$0.00
1988 Contract	88-30.15	$0.00
Subtotal for Construction Engineering Cost:		$22,109.64
Total Project Engineering Cost:		**$73,075.26**
Construction Costs:		
SHUMAKER TRUCKING AND EXCAVATING	$145,727.00	$145,727.00

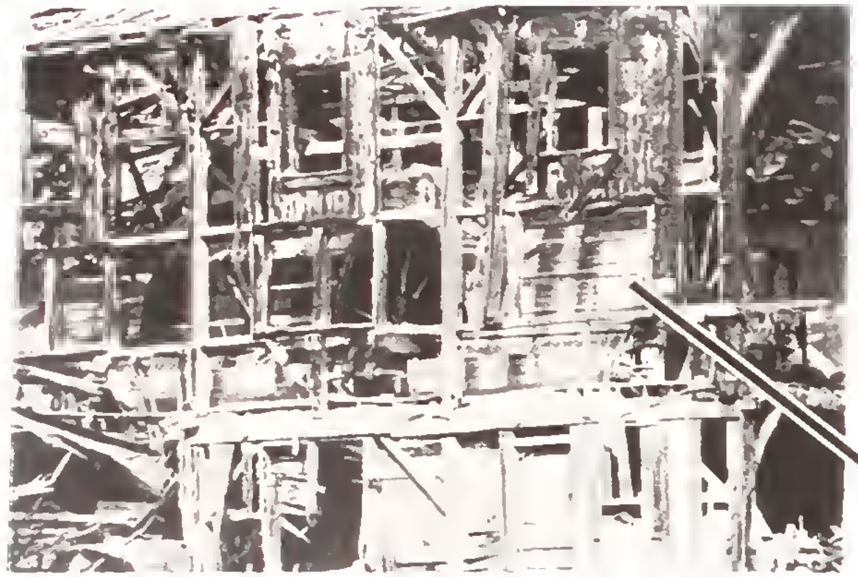
To Calculate Percentage of Engineering Fees to Construction Costs:

Design Engineering / Construction Cost	*34.97%*
Construction Engineering / Construction Cost	*15.17%*
Total Engineering Cost / Construction Cost	*50.15%*

Edit Date: DECEMBER 12, 1991---JHP

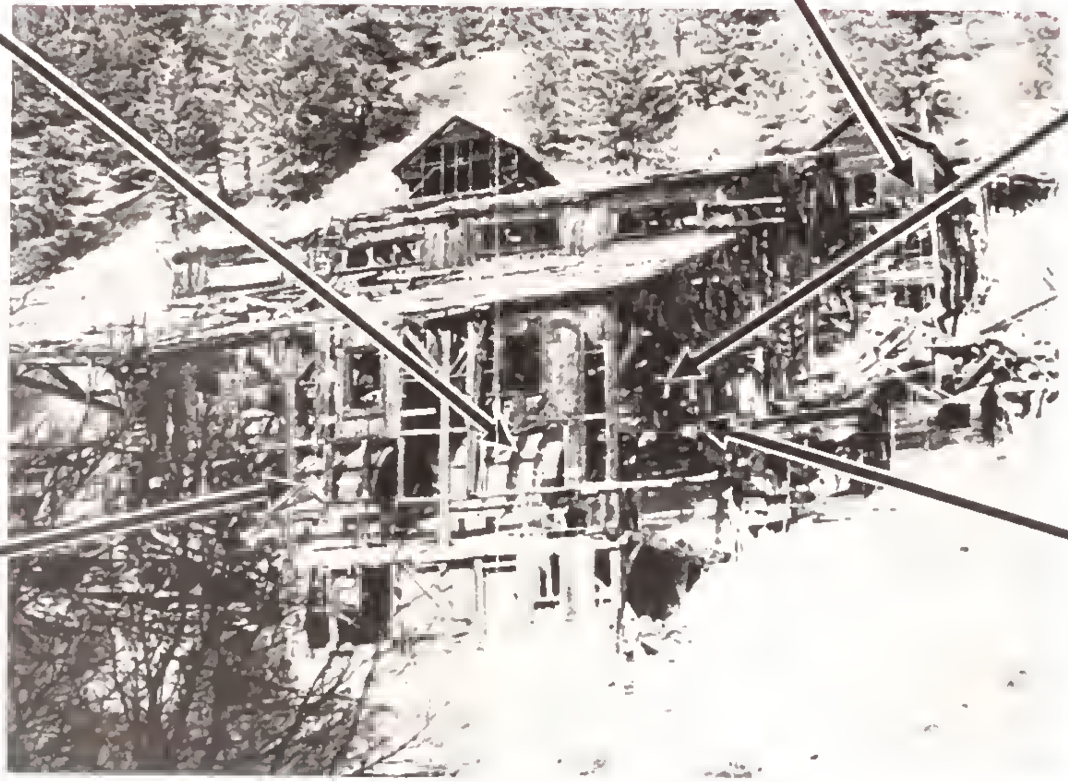
ATTACHMENT E

Record Drawings



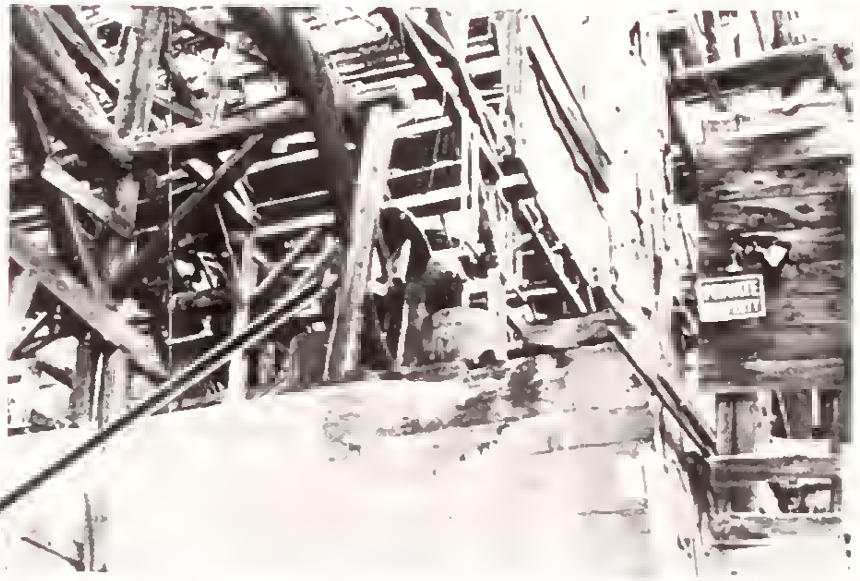
Small Flotation Separator

Large Flotation Separator
(Not Salvaged)



Location of Cone Crusher
and Jaw Crusher

Golden Messenger Mill Building



Two Cylinder Steam Engine
Front View

Two Cylinder Steam Engine
Side View

Record Drawing

Project Number 90-30.23
Date Feb., 1992
Designed By N. Ladas
Drawn By N. Ladas
Checked By N. Granger

Golden Messenger
Upper Site

Golden Messenger Mine
York Mining District

Robert Peccia & Associates, Helena, MT RPA

4

Sheet 4
of 4

ATTACHMENT F

Photographs/Slides

Only two copies of this report were submitted with photographs and/or slides. Those copies reside with the Department of State Lands - Abandoned Mine Reclamation Bureau. A listing of the photograph/slide legend is provided below. Please contact the AMRB to obtain project photographs.

GOLDEN MESSENGER MINE PROJECT
PHOTOGRAPH/SLIDE LEGEND

Number	Date	Description
1	9/16/91	Mill building looking north towards waste rock pile #1.
2	9/16/91	Front of mill building looking northeast. Cyanide mixing vat at right, small flotation separator in lower right corner of mill.
3	9/16/91	Mill building condition prior to dismantling.
4	9/16/91	Small flotation separator prior to removal and salvage.
5	9/16/91	Detail of small flotation separator prior to removal and salvage.
6	9/16/91	Detail of small flotation separator prior to removal and salvage.
7	9/16/91	Detail of small flotation separator prior to removal and salvage.
8	9/16/91	Detail of small flotation separator prior to removal and salvage.
9	9/16/91	Detail of small flotation separator prior to removal and salvage.
10	9/16/91	Detail of small flotation separator prior to salvage. Hopper below separator cylinder.
11	9/16/91	Detail of small flotation separator prior to removal and salvage.
12	9/16/91	Waste rock pile #2 south of mill building. Dozer cut road into pile and pushed rock down to front end loader with skeleton bucket which is used to sort out fines.
13	9/17/91	Mill building with pad cut to facilitate removal of small flotation separator.
14	9/18/91	Start grading of lower tailings pond.
15	9/18/91	Start grading of lower tailings pond.
16	9/18/91	Small flotation separator in mill building prior to salvage.
17	9/18/91	Concrete supports between flotation separator and iron hopper.
18	9/18/91	Timber supports on small flotation separator in mill building.
19	9/18/91	Mill building prior to dismantling.
20	9/18/91	Mill building and cyanide mixing vat in foreground, waste rock pile #2 in background. Front end loader with skeleton bucket hauling riprap.
21	9/19/91	Dismantling of cyanide mixing vat.

GOLDEN MESSENGER MINE PROJECT
PHOTOGRAPH/SLIDE LEGEND

Number	Date	Description
22	9/19/91	Natural channel (Brown's Gulch) north of waste rock pile #1 with timbers removed.
23	9/19/91	Burning wood debris from mill building on upper tailings pond.
24	9/20/91	Small flotation separator prior to salvage from mill building.
25	9/20/91	Removal of small flotation separator with dozer (foreground) and excavator (background).
26	9/20/91	Removal of small flotation separator with dozer (foreground) and excavator (background).
27	9/20/91	1 of 3 - Dismantling of mill building. Excavator shovel used to push over main support in lower right corner of building.
28	9/20/91	2 of 3 - Dismantling of mill building. Excavator shovel used to push over main support in lower right corner of building.
29	9/20/91	3 of 3 - Dismantling of mill building. Excavator shovel used to push over main support in lower right corner of building.
30	9/20/91	Dismantling of mill building. Timbers to be salvaged are removed first.
31	9/20/91	Dismantling of mill building. Large flotation separator in lower left corner still intact.
32	9/20/91	Dismantling of mill building. Small flotation separator at right with support timbers and hopper still attached.
33	9/20/91	Same view as #32 except looking toward cyanide mixing vat.
34	9/23/91	Grading of lower tailings pond.
35	9/23/91	Dismantling of mill building. Note large flotation separator which was not salvaged.
36	9/23/91	Breaking large flotation separator for burning.
37	9/23/91	Graded lower tailings pond dam face.
38	9/23/91	Grading top of lower tailings pond.
39	9/23/91	Graded lower tailings pond dam face.
40	9/24/91	Front end loader piling mill debris on upper tailings pond.
41	9/24/91	1 of 2 - Dismantling mill building. Dozer is pushing a main beam to collapse the structure.

GOLDEN MESSENGER MINE PROJECT
PHOTOGRAPH/SLIDE LEGEND

Number	Date	Description
42	9/24/91	2 of 2 - Dismantling mill building.
43	9/24/91	Adit #2 - brush removed and ground leveled to prepare for culvert closure.
44	9/24/91	1 of 2 - mill at end of day. Note salvaged small flotation separator at bottom right and salvaged timbers pile on slope above it.
45	9/24/91	2 of 2 - Mill at end of day. Waste rock pile #2 to south of mill. This is the source for Type 1 and 2 riprap.
46	9/24/91	Adit #1 slope graded to facilitate placement of rock in adit.
47	9/25/91	Upper tailings pond looking south. Debris piled for burning. Note salvaged cone and jaw crushers at lower left.
48	9/25/91	Upper tailings pond looking southwest. Trench was dug and mill debris was pushed into trench for safer burning.
49	9/25/91	Grading upper tailings pond dam face.
50	9/25/91	Profile of trench in upper tailings pond.
51	9/25/91	Mill building completely dismantled except for concrete foundations.
52	9/27/91	Excavator clearing area for channel between the upper and lower tailings ponds.
53	9/27/91	Excavator and front end loader clearing area for channel between upper and lower tailings ponds.
54	9/27/91	Cleared area for mat-lined channel looking north towards graded face of upper tailings pond.
55	9/27/91	Cleared area for mat-lined channel looking north towards graded face of upper tailings pond.
56	9/27/91	Stakes laid for upper tailings pond riprap channel.
57	9/27/91	Excavating mat-lined channel on lower tailings pond.
58	9/27/91	Excavating mat-lined channel on lower tailings pond. Looking north towards upper tailings pond.
59	9/27/91	Excavating mat-lined channel on lower tailings pond. Looking north towards upper tailings pond.
60	9/27/91	Hauling and stockpiling Type 1 riprap on lower tailings pond.

GOLDEN MESSENGER MINE PROJECT
PHOTOGRAPH/SLIDE LEGEND

Number	Date	Description
61	9/27/91	Graded channel prepared for bank stabilization fabric, gravel and Type 1 riprap placement.
62	9/27/91	Graded channel prepared for bank stabilization fabric, Type 5 and Type 1 riprap placement.
63	9/30/91	Damaged hopper removed from small flotation separator.
64	9/30/91	Damaged hopper removed from small flotation separator.
65	9/30/91	Graded lower tailings pond channel prior to placement of erosion control mat.
66	9/30/91	Grading slope at mill building site. Concrete foundations will be buried in slope.
67	9/30/91	Grading slope at mill building site. Concrete foundations will be buried in slope.
68	10/1/91	Partially graded slope at mill building site.
69	10/1/91	Grading slope at mill building site.
70	10/2/91	Placing Type 5 riprap on bank stabilization fabric in lower tailings pond channel.
71	10/2/91	Spreading Type 5 riprap on bank stabilization fabric in lower tailings pond channel. Excavator is used to spread Type 1 riprap.
72	10/2/91	Excavator spreading Type 1 riprap in lower tailings pond channel.
73	10/2/91	Digging a key trench in lower tailings pond channel.
74	10/3/91	Riprap channel in lower tailings pond.
75	10/3/91	Riprap channel in lower tailings pond.
76	10/3/91	Four by four foot key trench at head of riprap channel in lower tailings pond.
77	10/3/91	Culvert in adit #2 on four inch bedding material.
78	10/3/91	Riprap channel in lower tailings pond prior to spreading riprap.
79	10/3/91	Graded slope on waste rock pile #1.
80	10/3/91	Lower tailings pond slope looking southwest at lower stilling basin.
81	10/4/91	Burning debris on upper tailings pond.

GOLDEN MESSENGER MINE PROJECT
PHOTOGRAPH/SLIDE LEGEND

Number	Date	Description
82	10/4/91	Culvert in adit #2 with gate closure.
83	10/4/91	Lower stilling basin with riprap placed.
84	10/7/91	Placing riprap in upper tailings pond channel and stilling basin
85	10/7/91	Upper tailings pond riprap channel. Excavator is spreading Type 1 riprap.
86	10/7/91	Haybuster spreading hay on upper tailings pond.
87	10/8/91	Straw mulch spread on upper tailings pond.
88	10/8/91	Incorporating straw mulch on upper tailings pond with disk.
89	10/8/91	East area soils pit for coversoil sample.
90	10/8/91	East area from which soil sample was taken.
91	10/8/91	East area from which soil sample was taken.
92	10/8/91	Coversoil borrow area. Excavator stuck in wet soil.
93	10/8/91	Coversoil borrow area. Fish pond was excavated for the landowner.
94	10/8/91	Coversoil borrow area.
95	10/9/91	Placing Type 5 riprap on bank stabilization fabric in upper tailings pond channel.
96	10/9/91	Coversoil dumped on upper tailings pond to dry out before spreading.
97	10/9/91	Riprap channel in upper tailings pond prior to spreading Type 1 riprap.
98	10/9/91	Incorporating straw mulch with rippers into upper tailings pond. Straw mulch was then disked.
99	10/14/91	Spreading coversoil on upper tailings pond with grader.
100	10/14/91	Graded waste rock pile #1 with channel cut in slope.
101	10/14/91	Graded waste rock pile #1 with channel cut in slope.
102	10/14/91	Backfilled and graded area where old storage structure was removed.
103	10/14/91	Area from where calcium carbonate was removed looking north into natural channel of Brown's Gulch.

GOLDEN MESSENGER MINE PROJECT
PHOTOGRAPH/SLIDE LEGEND

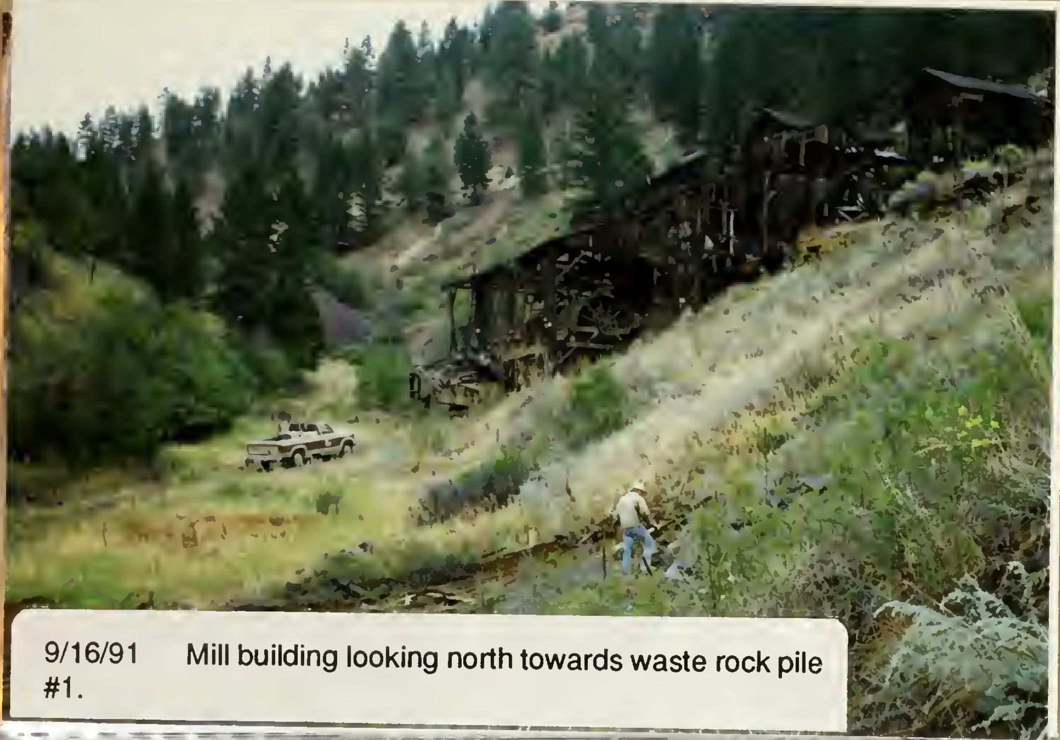
Number	Date	Description
104	10/14/91	Looking north into natural channel of Brown's Gulch after timbers were removed.
105	10/15/91	Coversoil borrow area looking northeast up Trout Creek drainage.
106	10/15/91	Coversoil borrow area looking northeast up Trout Creek drainage.
107	10/16/91	Placing jaw crusher on lowboy trailer for transport to Lewis and Clark County fairgrounds.
108	10/16/91	Placing cone crusher on lowboy trailer for transport to Lewis and Clark County fairgrounds.
109	10/16/91	Placing cone crusher in dump truck for transport to Lewis and Clark County fairgrounds.
110	10/16/91	Placing cone crusher in dump truck for transport to Lewis and Clark County fairgrounds.
111	10/16/91	Erosion control mat in seeded, fertilized and mulched channel on upper tailings pond.
112	10/16/91	Key trenches on contour and along edge of erosion control mat-lined channel on upper tailings pond.
113	10/16/91	Grading berm for upper stilling basin at base of upper tailings pond riprap channel.
114	10/16/91	Graded slope at mill building site.
115	10/16/91	Graded slope at mill building site with stockpiled Type 2 riprap in foreground.
116	10/16/91	Hauling flotation separator to Lewis and Clark County fairgrounds.
117	10/16/91	Hauling flotation separator to Lewis and Clark County fairgrounds.
118	10/16/91	Unloading flotation separator with two front end loaders at fairgrounds.
119	10/16/91	Unloading flotation separator with two front end loaders at fairgrounds.
120	10/16/91	Unloading flotation separator with two front end loaders at fairgrounds.
121	10/17/91	Erosion control mat-lined channel with check dams every 50 feet in upper tailings pond.
122	10/17/91	Downstream end of mat-lined channel at transition to riprap channel on upper tailings pond.

GOLDEN MESSENGER MINE PROJECT
PHOTOGRAPH/SLIDE LEGEND

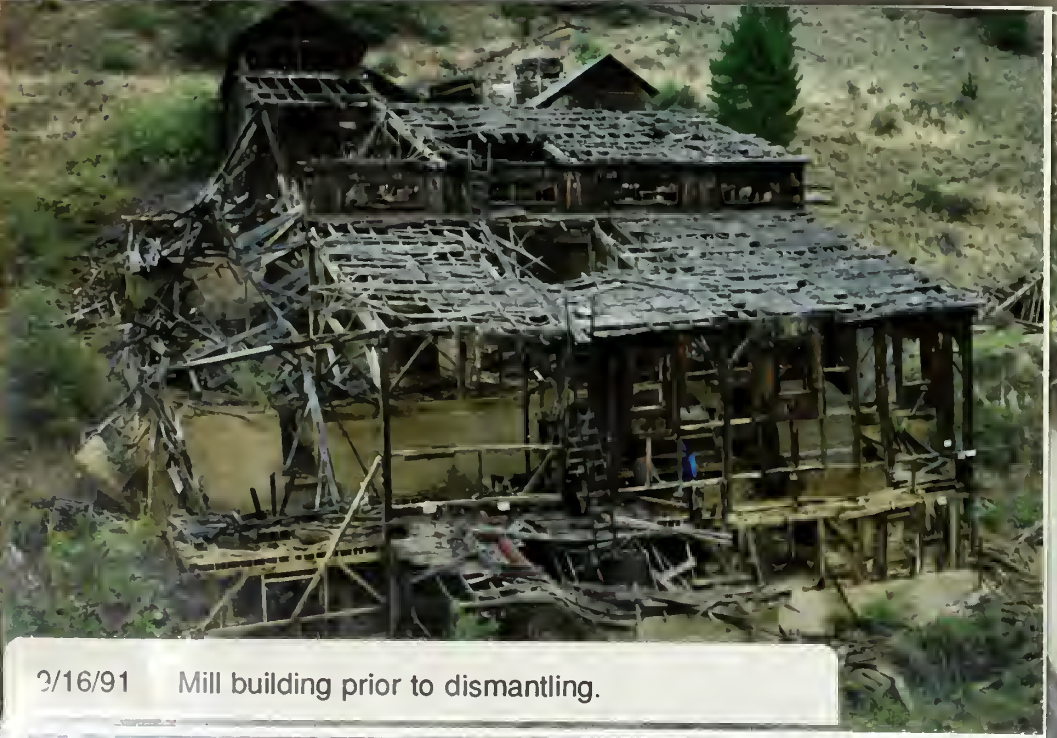
Number	Date	Description
123	10/17/91	Erosion control mat-lined channel with check dams every 50 feet in upper tailings pond.
124	10/17/91	Placing Type 2 riprap for check dams in mat-lined channel in lower tailings pond.
125	10/17/91	Incorporating wood fiber mulch on waste rock pile #1.
126	10/17/91	Incorporating wood fiber mulch on waste rock pile #1.
127	10/17/91	Mat-lined channel with check dams in lower tailings pond from upper stilling basin.
128	10/18/91	View of coversoil borrow area and Trout Creek looking southwest.
129	10/18/91	Spreading coversoil on upper tailings pond and area disturbed by hauling riprap from waste rock pile #2.
130	10/18/91	Coversoil on area below mill building slope looking north.
131	10/21/91	Seeding with drill on upper tailings pond.
132	10/22/91	Straw mulch placement on waste rock pile #1.
133	10/22/91	Mill building site slope prepared for seeding and hydromulching.
134	10/22/91	North end of mat lined channel on upper tailings pond.
135	10/22/91	Crimped straw mulch on lower tailings pond slope.
136	10/23/91	Straw mulching area below mill building site.
137	10/23/91	Coversoiled upper tailings pond prepared for seed, fertilizer and mulch.
138	10/23/91	Crimping straw mulch adjacent to upper end of mat lined channel on upper tailings pond.
139	10/23/91	Hydromulching slope below adit #1.
140	10/23/91	Prepared seedbed at coversoil borrow area.
141	10/23/91	Crimping straw mulch on upper tailings pond.
142	10/23/91	Upper tailings pond area partially straw mulched.
143	10/23/91	Hydromulching mill building site.

GOLDEN MESSENGER MINE PROJECT
PHOTOGRAPH/SLIDE LEGEND

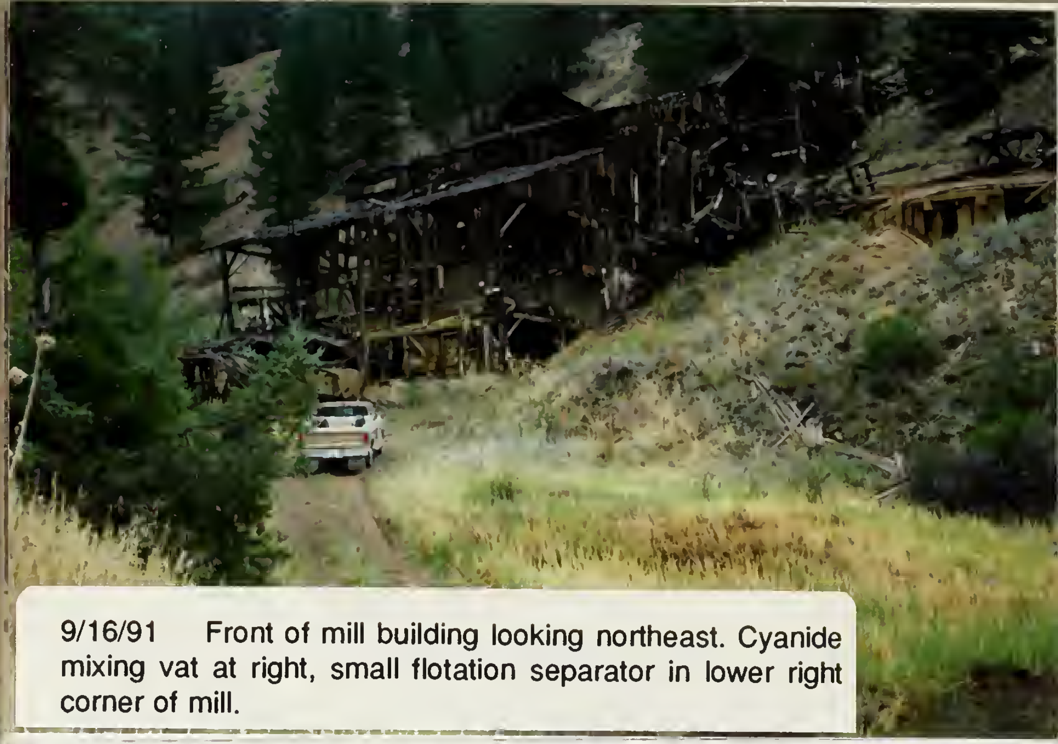
Number	Date	Description
144	10/24/91	Crimping straw mulch at coversoil borrow area.
145	10/28/91	Fence and gate at upper tailings pond.
146	11/4/91	Small flotation separator stored at fairgrounds.
147	11/4/91	Timbers and small flotation separator stored at fairgrounds.
148	11/4/91	Cone crusher, jaw crusher and steam engine stored at fairgrounds.
149	11/8/91	Staging area where trailers and equipment were kept. This area was seeded and mulched but then disturbed by removing equipment.
150	11/8/91	Staging area where trailers and equipment were kept. This area was seeded and mulched but then disturbed by removing equipment.
151	11/8/91	Staging area disturbed by removal of equipment.
152	11/8/91	Staging area disturbed by removal of equipment.



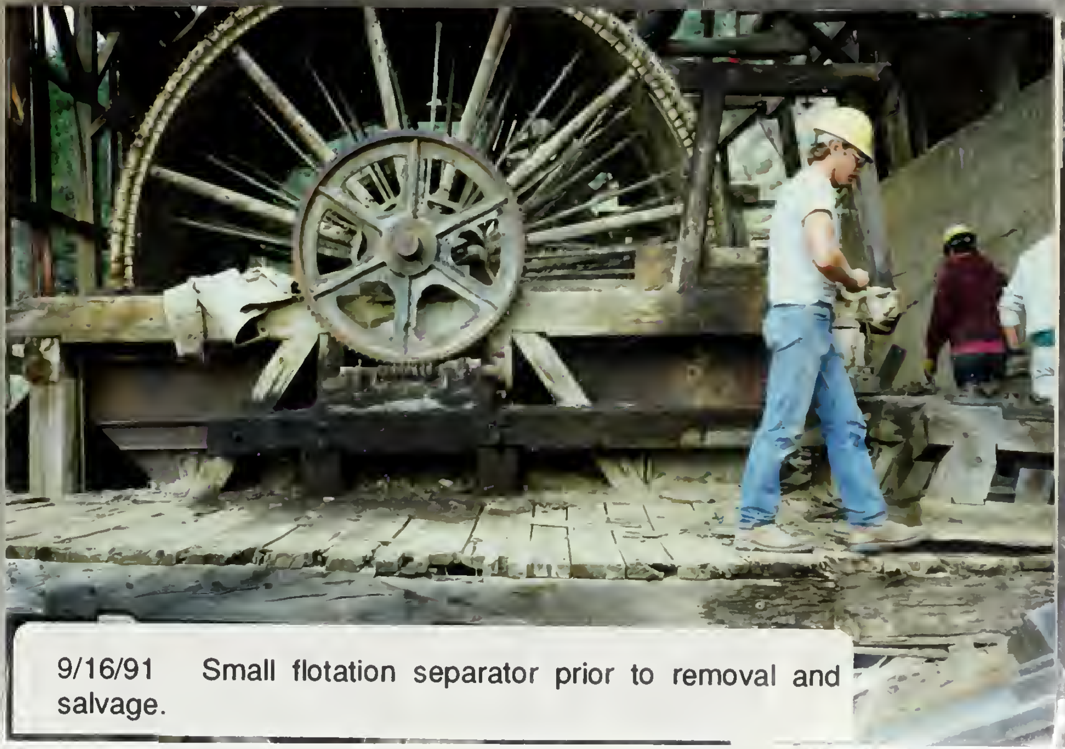
9/16/91 Mill building looking north towards waste rock pile #1.



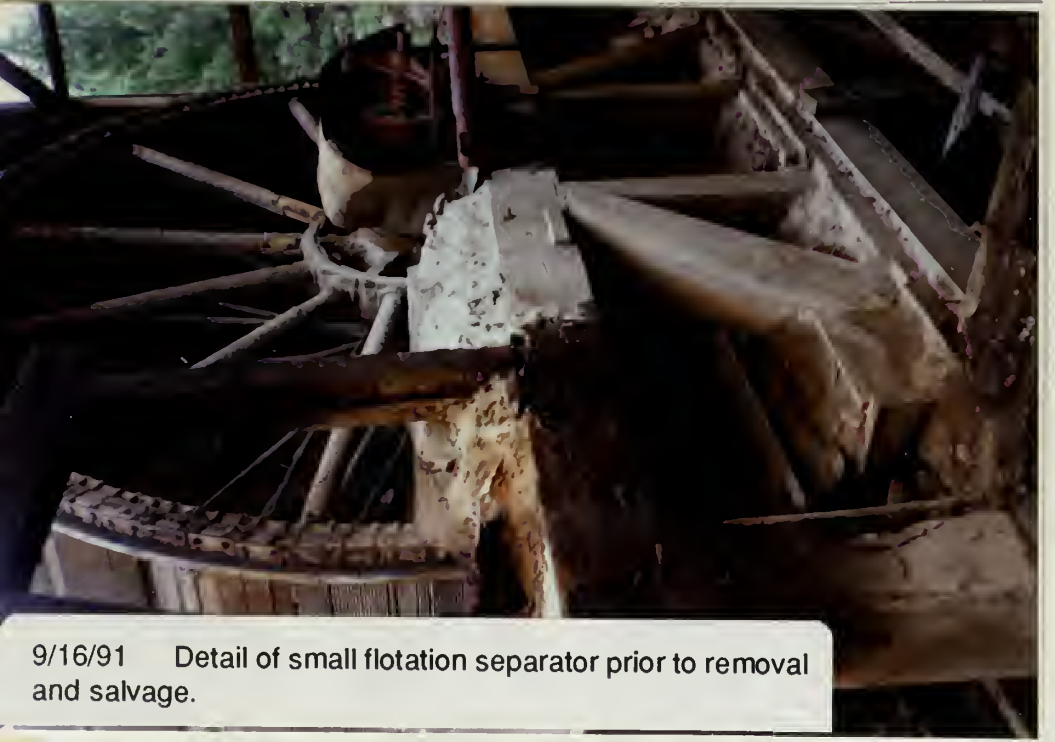
9/16/91 Mill building prior to dismantling.



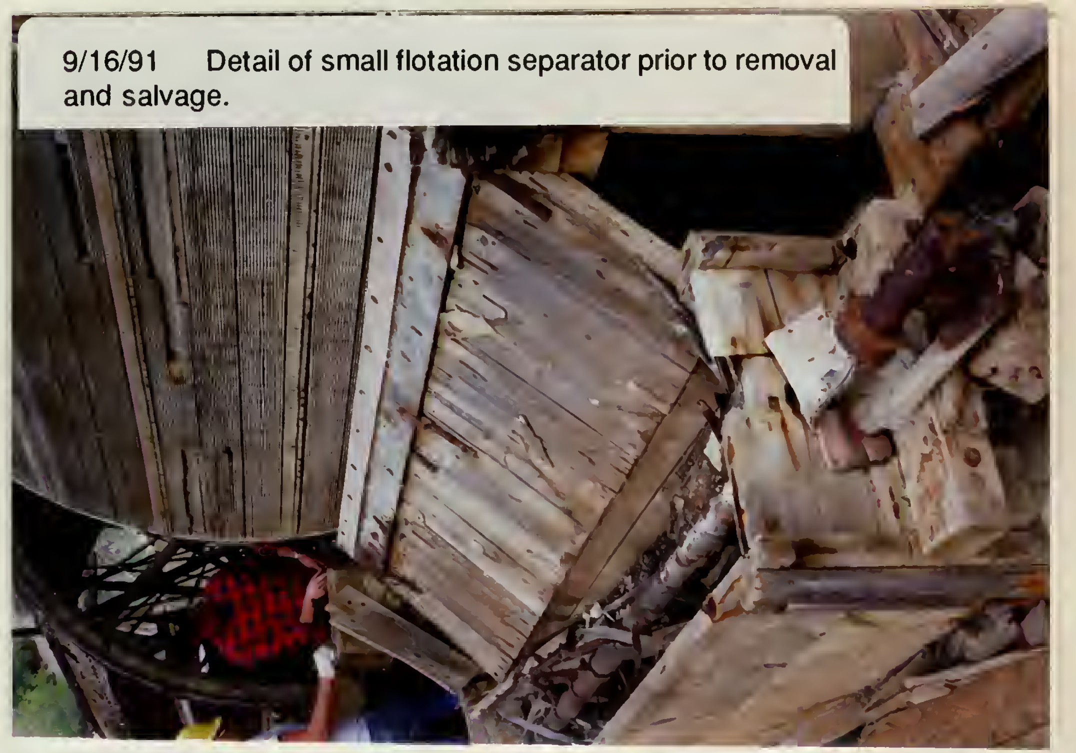
9/16/91 Front of mill building looking northeast. Cyanide mixing vat at right, small flotation separator in lower right corner of mill.



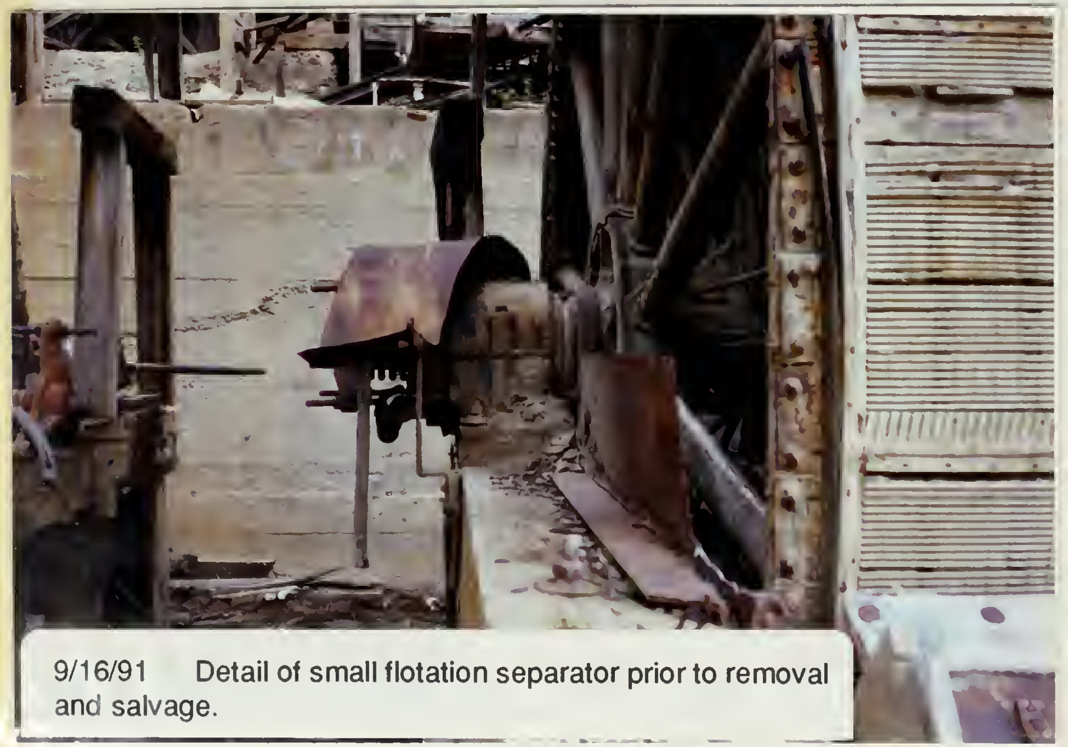
9/16/91 Small flotation separator prior to removal and salvage.



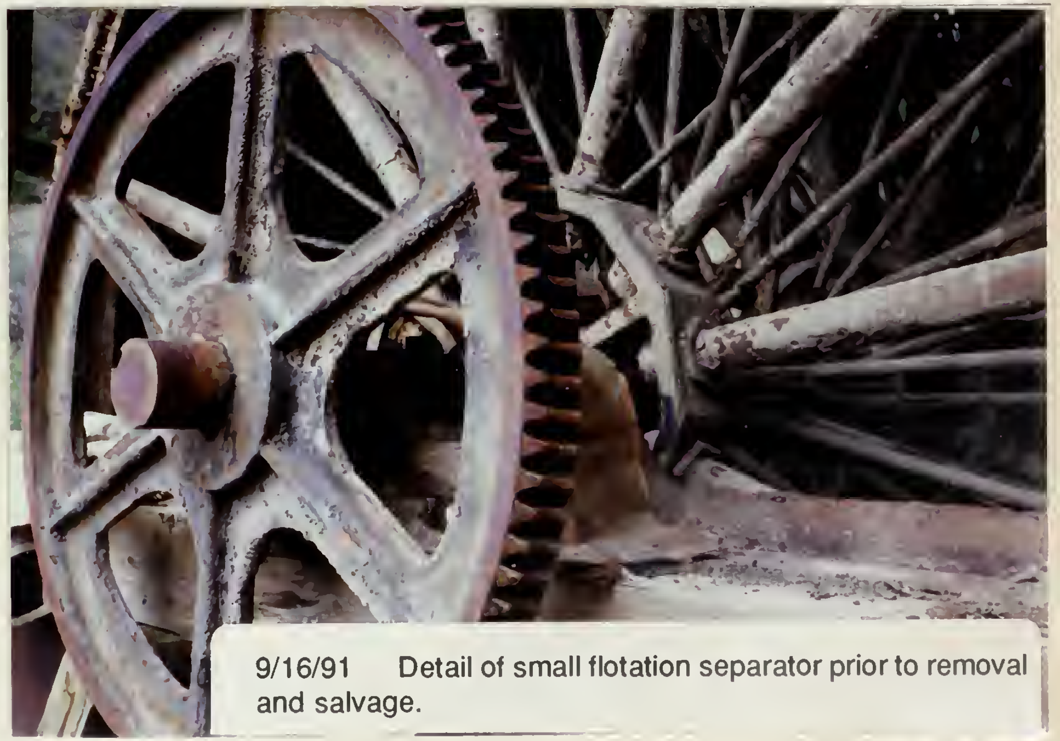
9/16/91 Detail of small flotation separator prior to removal and salvage.



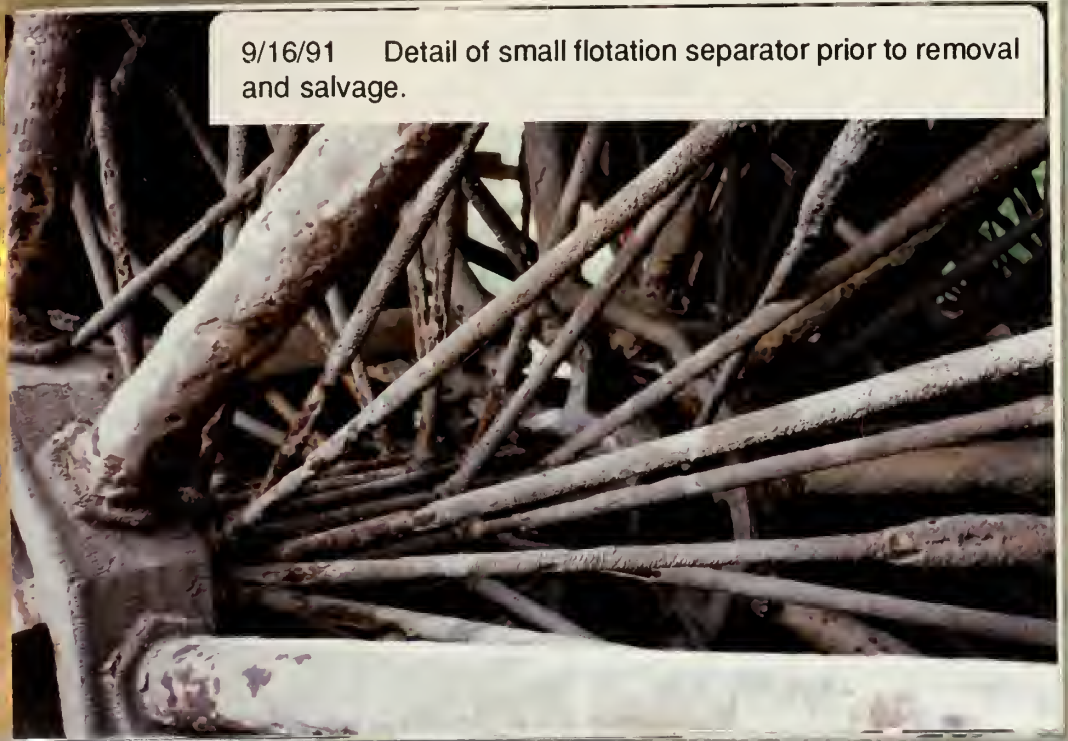
9/16/91 Detail of small flotation separator prior to removal and salvage.



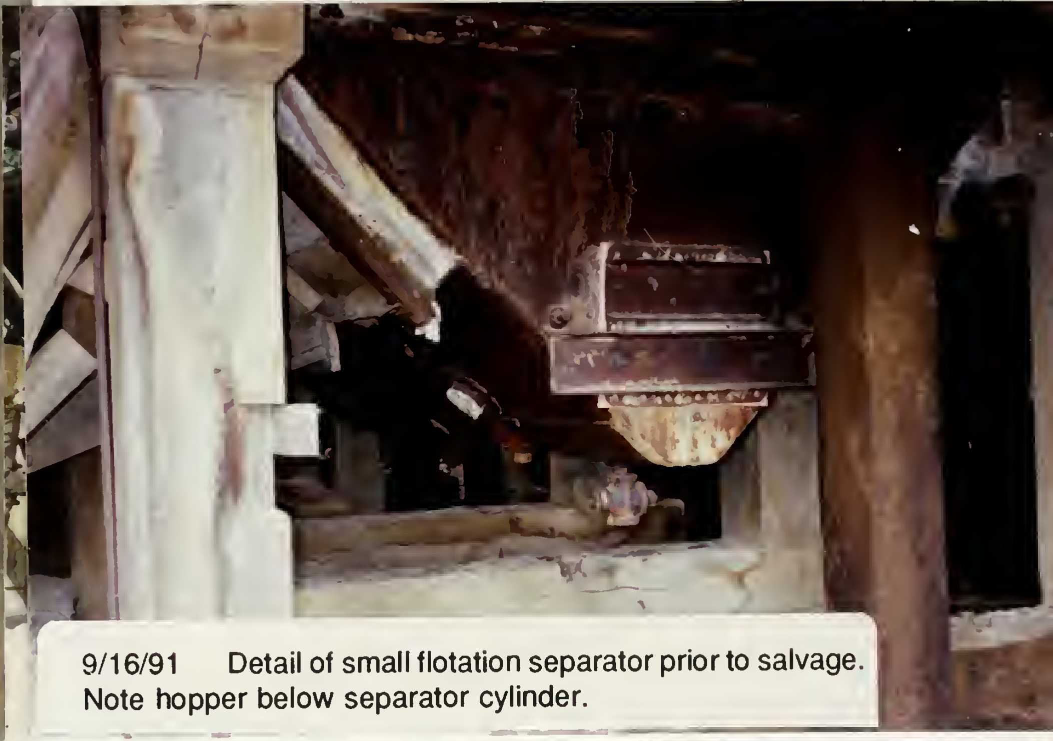
9/16/91 Detail of small flotation separator prior to removal and salvage.



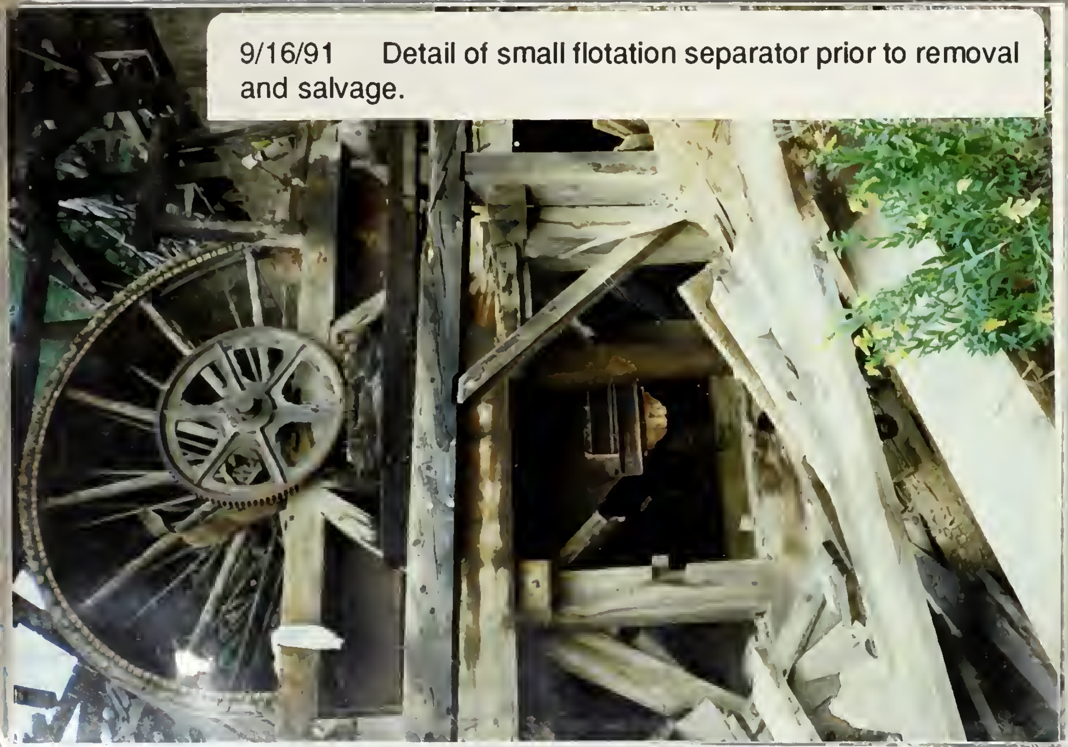
9/16/91 Detail of small flotation separator prior to removal and salvage.



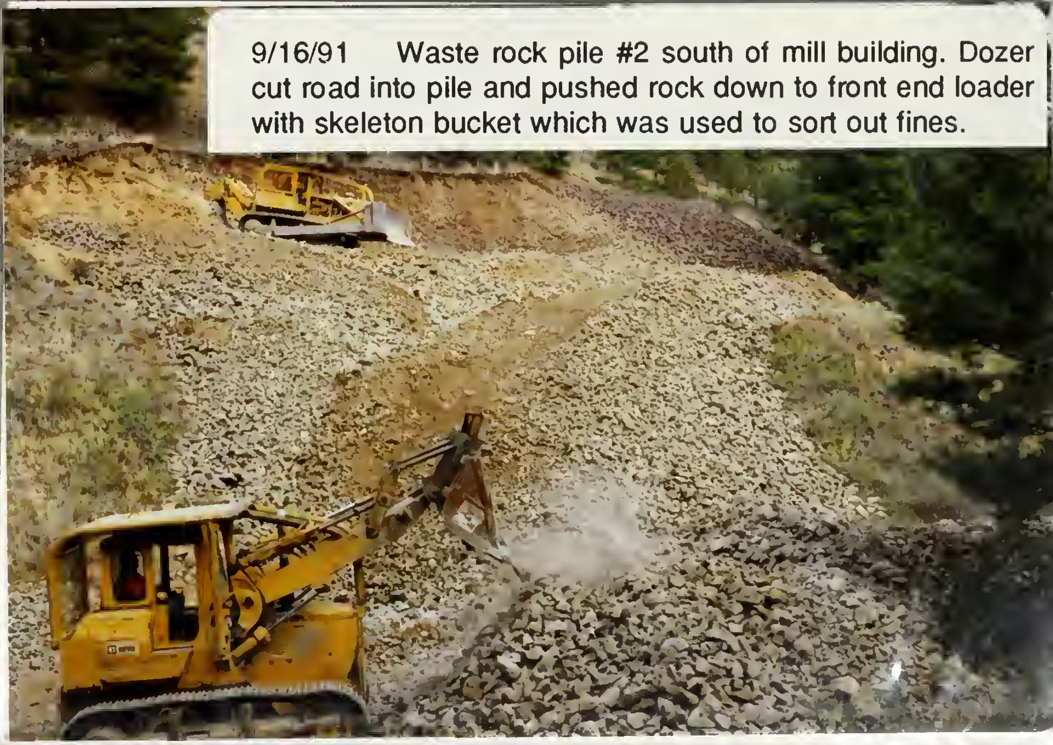
9/16/91 Detail of small flotation separator prior to removal and salvage.



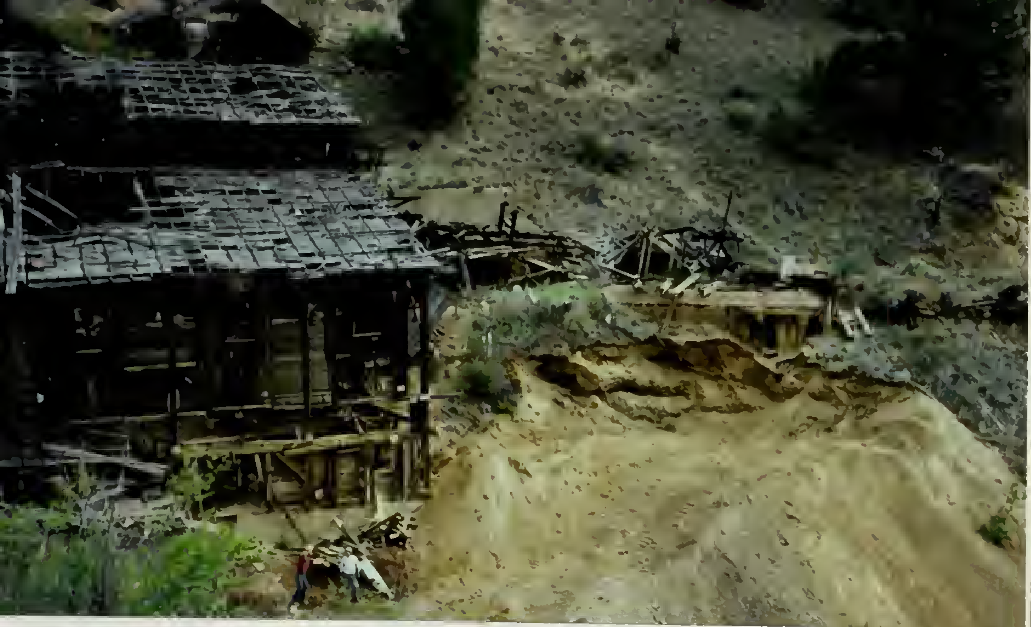
9/16/91 Detail of small flotation separator prior to salvage. Note hopper below separator cylinder.



9/16/91 Detail of small flotation separator prior to removal and salvage.



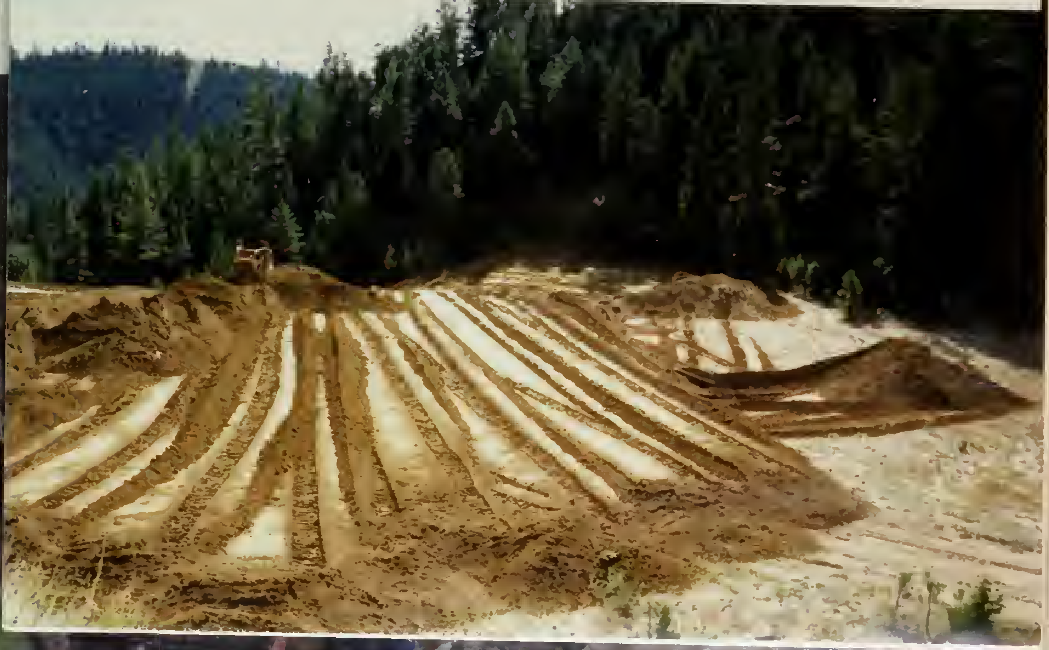
9/16/91 Waste rock pile #2 south of mill building. Dozer cut road into pile and pushed rock down to front end loader with skeleton bucket which was used to sort out fines.



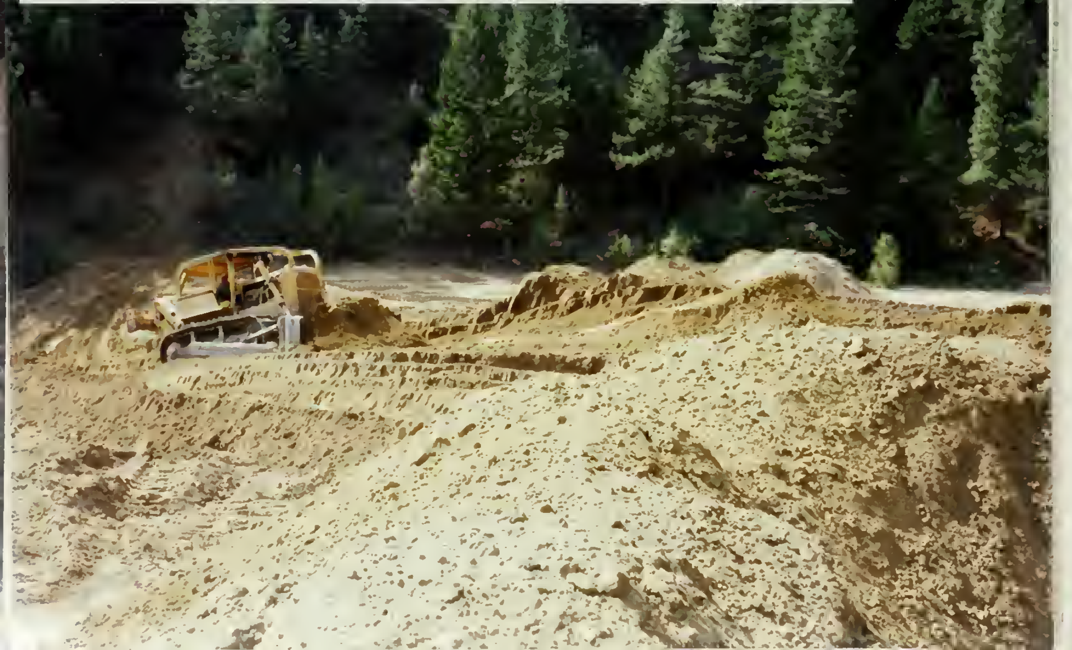
9/17/91 Mill building with pad cut to facilitate removal of small flotation separator.

and salvage.

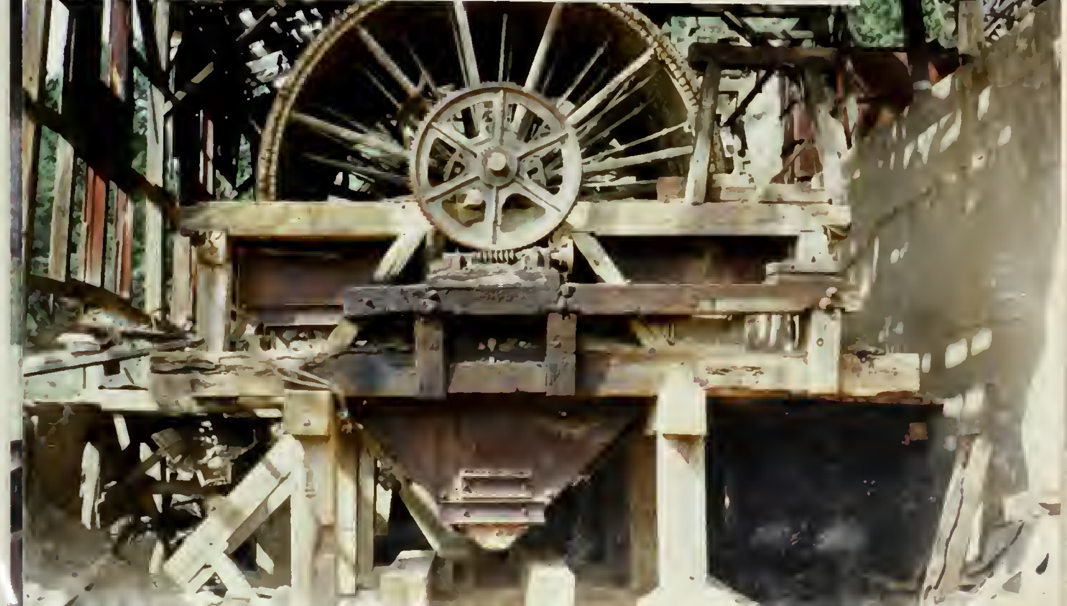
9/18/91 Start grading of lower tailings pond.

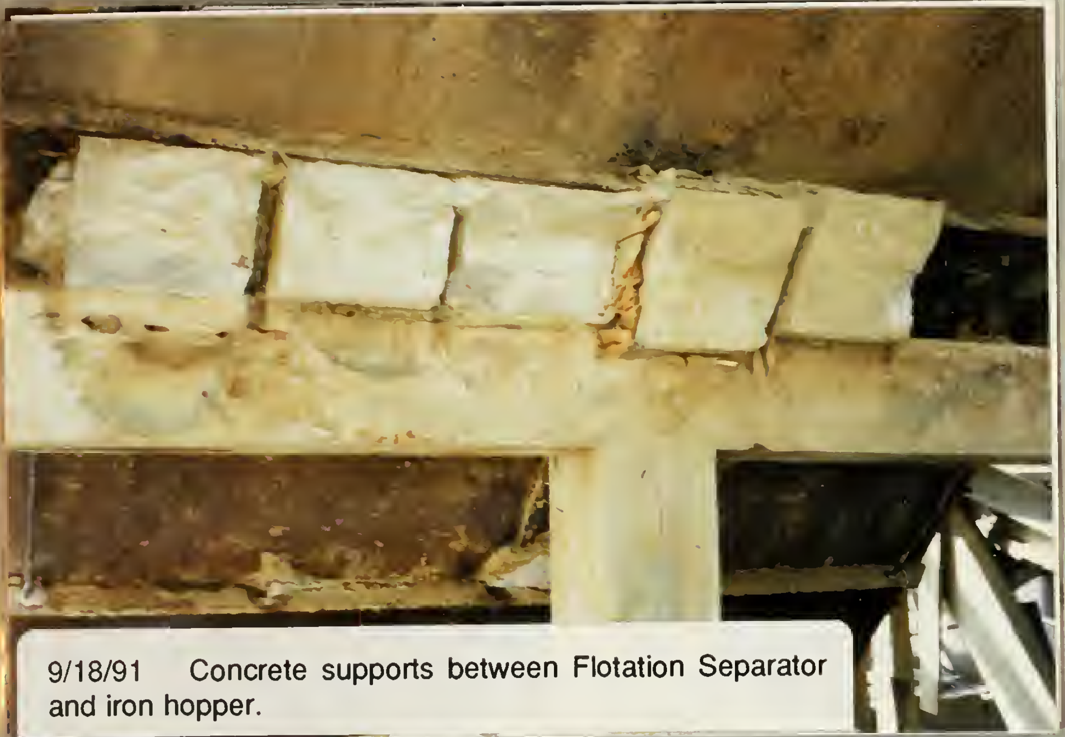


9/18/91 Start grading of lower tailings pond.

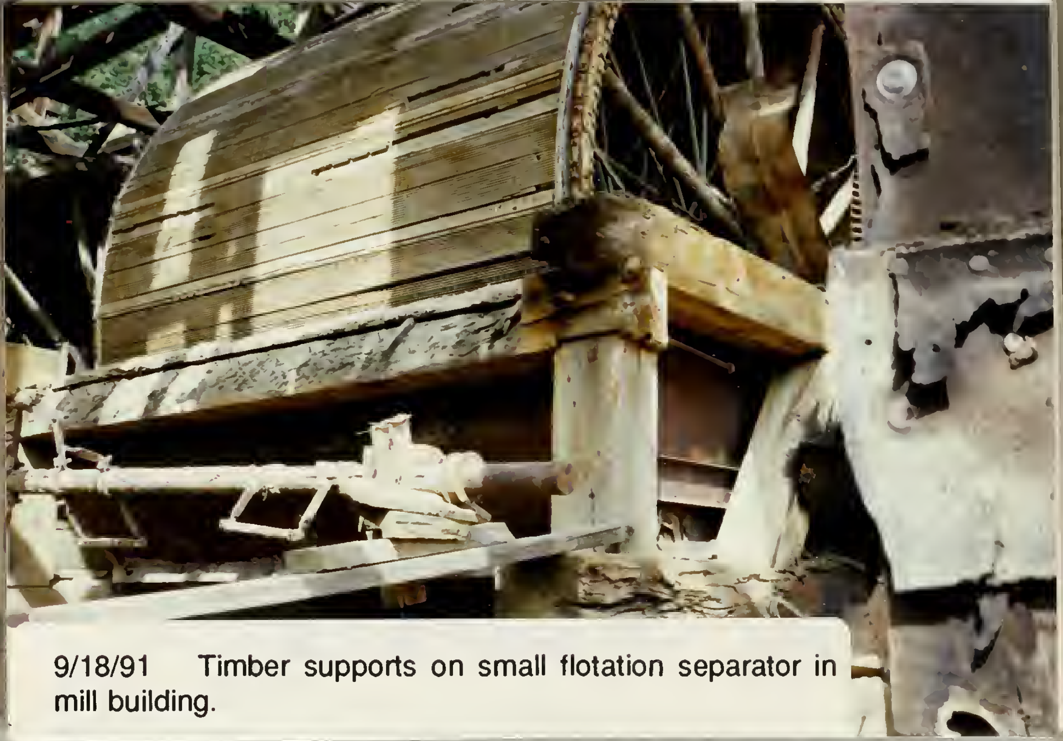


9/18/91 Small flotation separator in mill building prior to salvage.

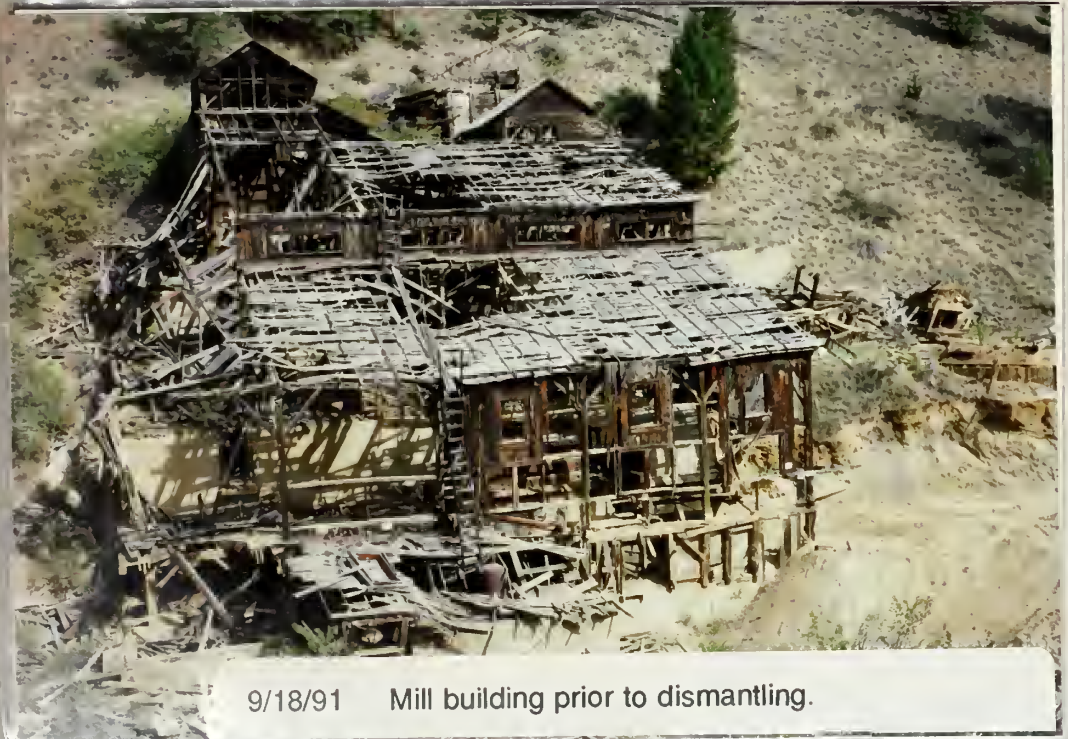




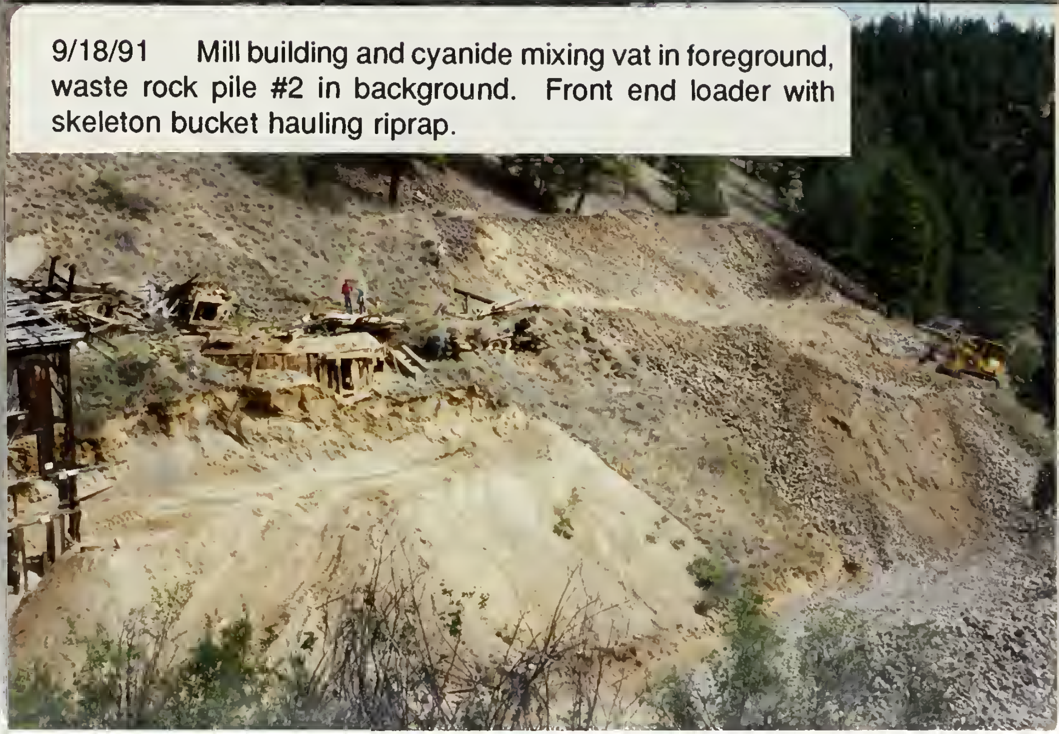
9/18/91 Concrete supports between Flotation Separator and iron hopper.



9/18/91 Timber supports on small flotation separator in mill building.

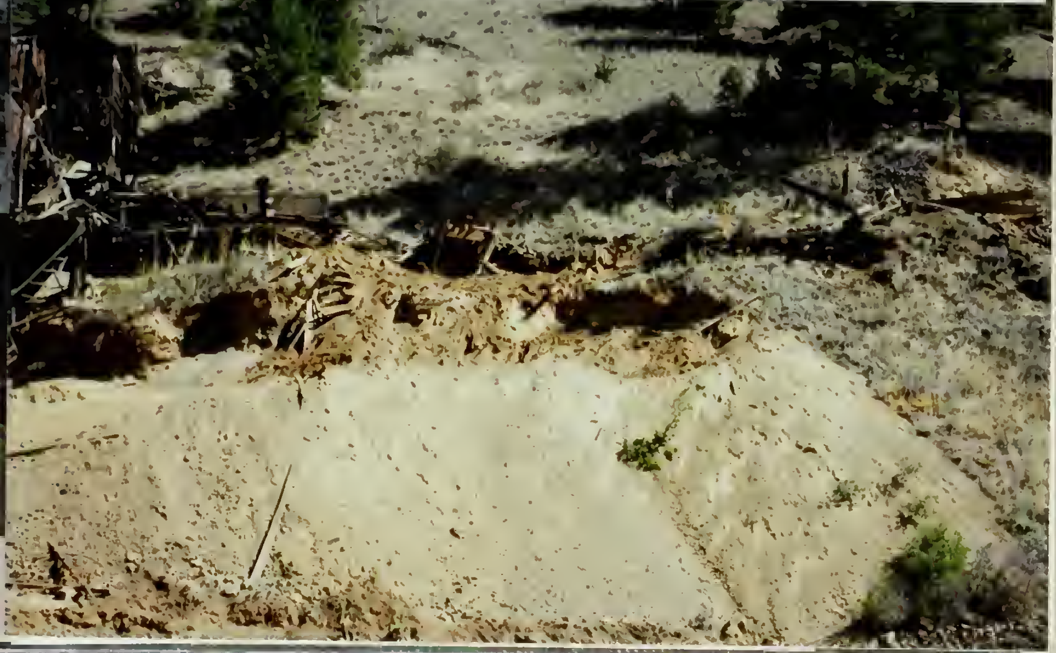


9/18/91 Mill building prior to dismantling.



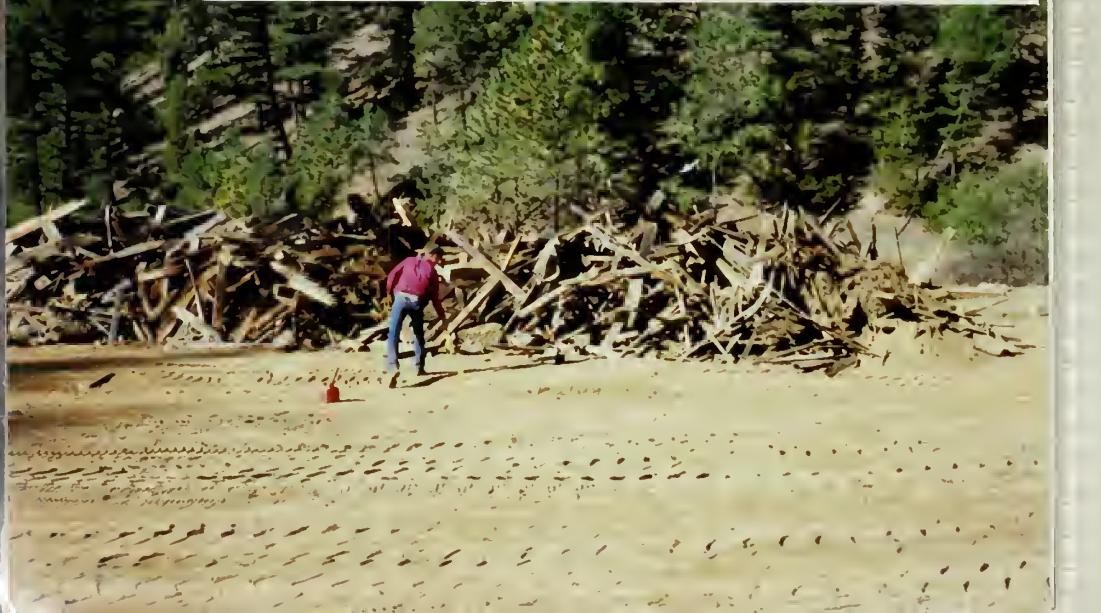
9/18/91 Mill building and cyanide mixing vat in foreground, waste rock pile #2 in background. Front end loader with skeleton bucket hauling riprap.

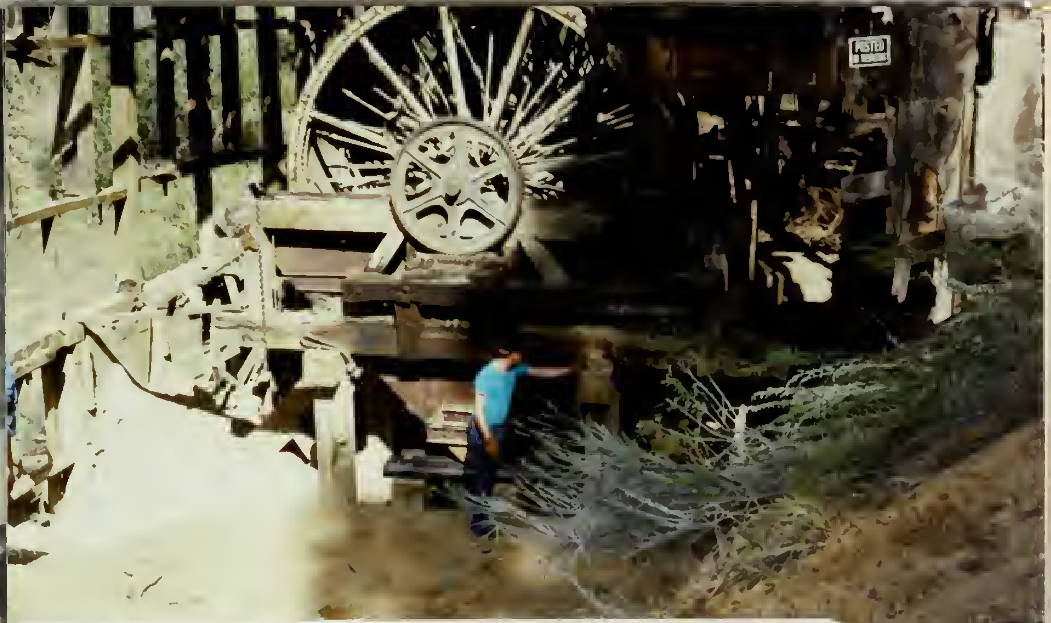
9/19/91 Dismantling of cyanide mixing vat.



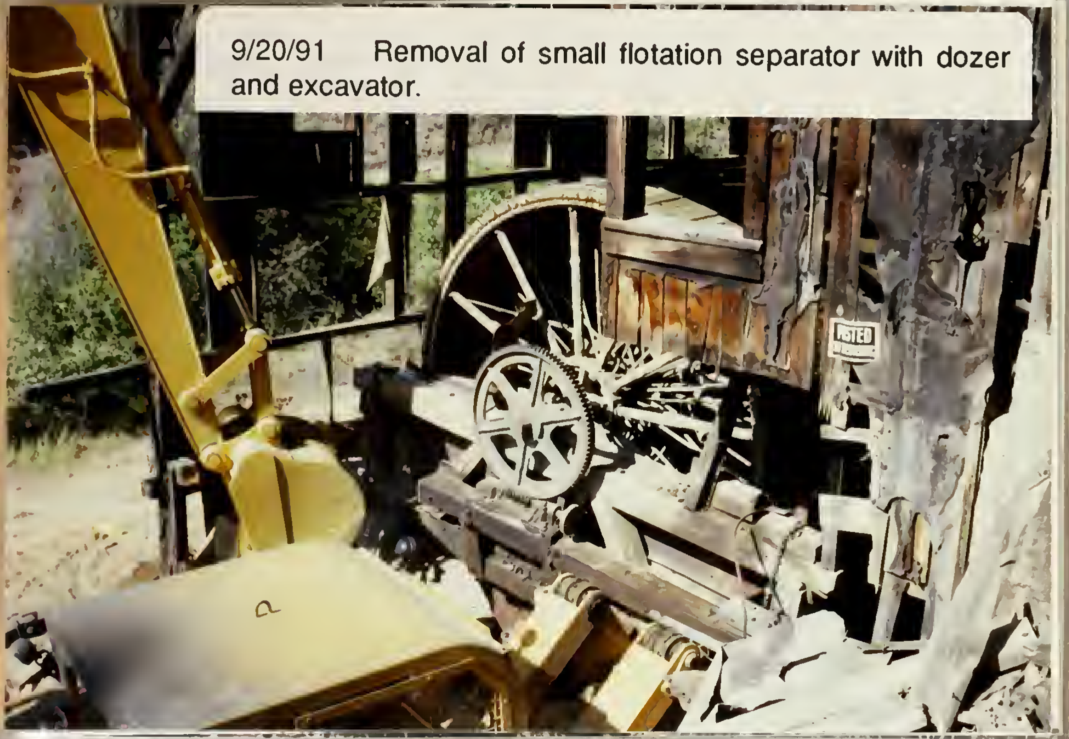
9/19/91 Natural channel (Brown's Gulch) north of waste rock pile #1 with timbers removed.

9/19/91 Burning wood debris from mill building on upper tailings pond.

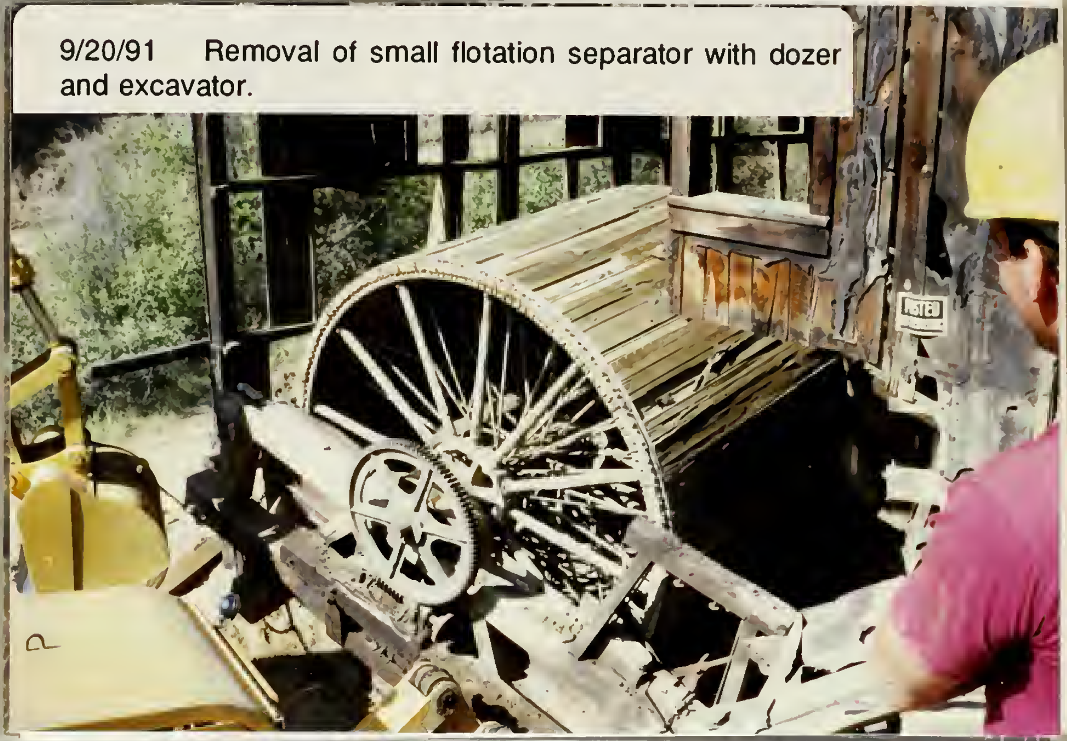




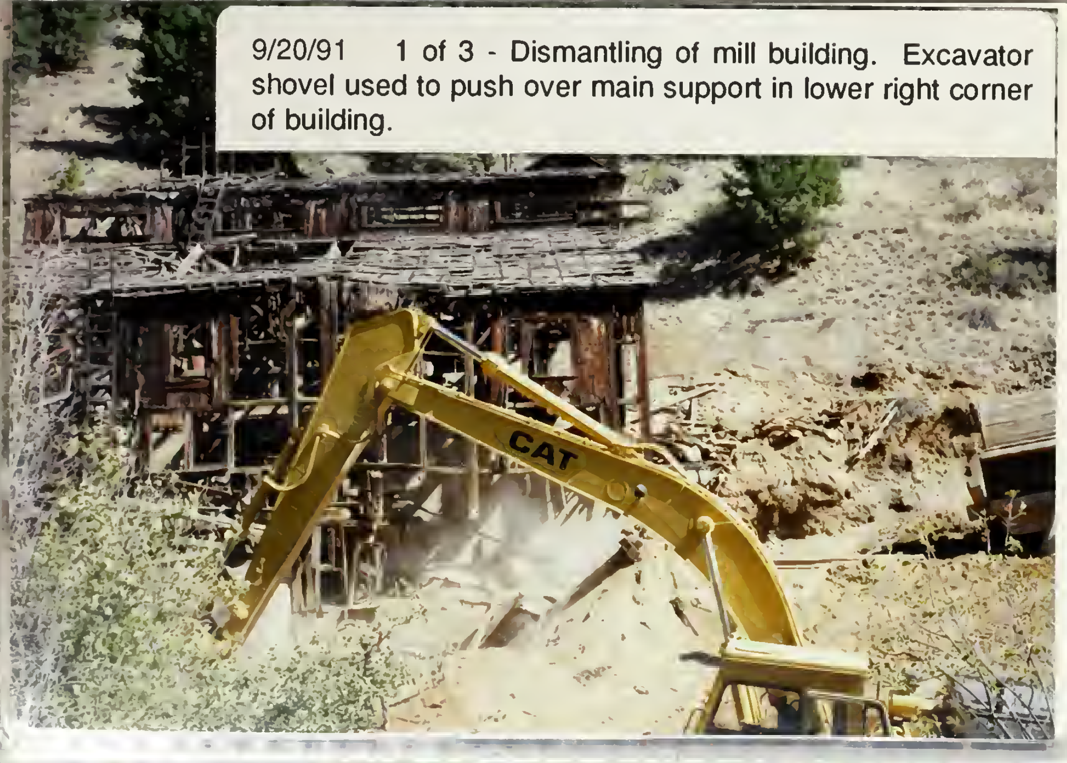
9/20/91 Small flotation Separator prior to salvage from mill building.



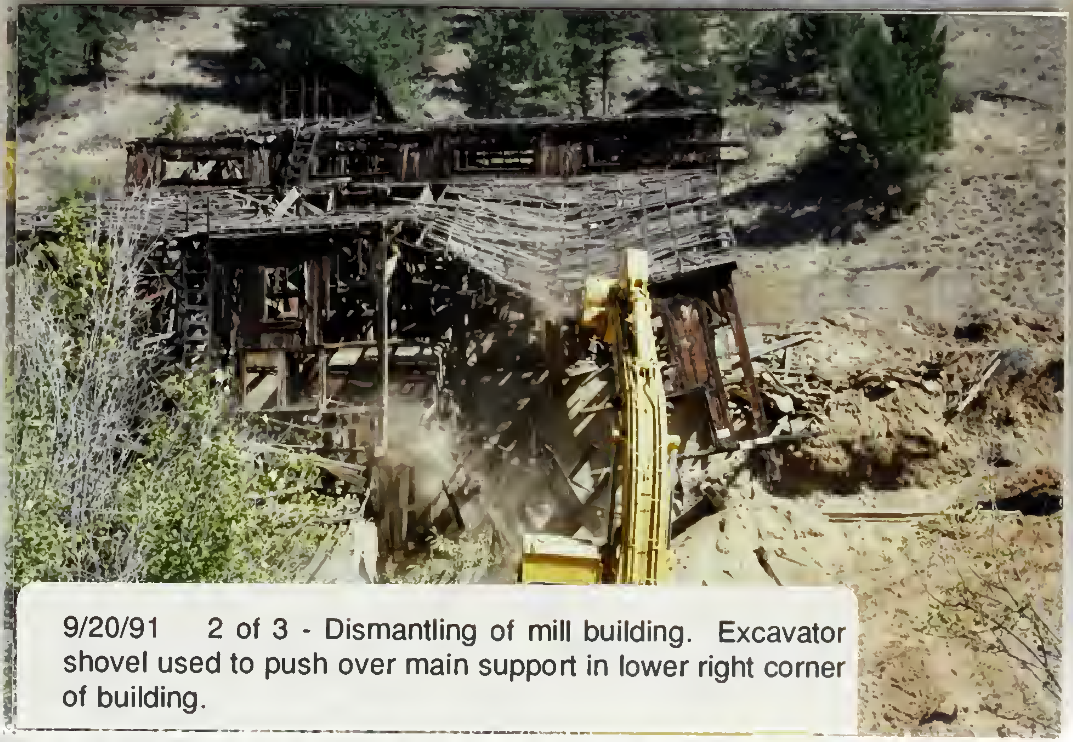
9/20/91 Removal of small flotation separator with dozer and excavator.



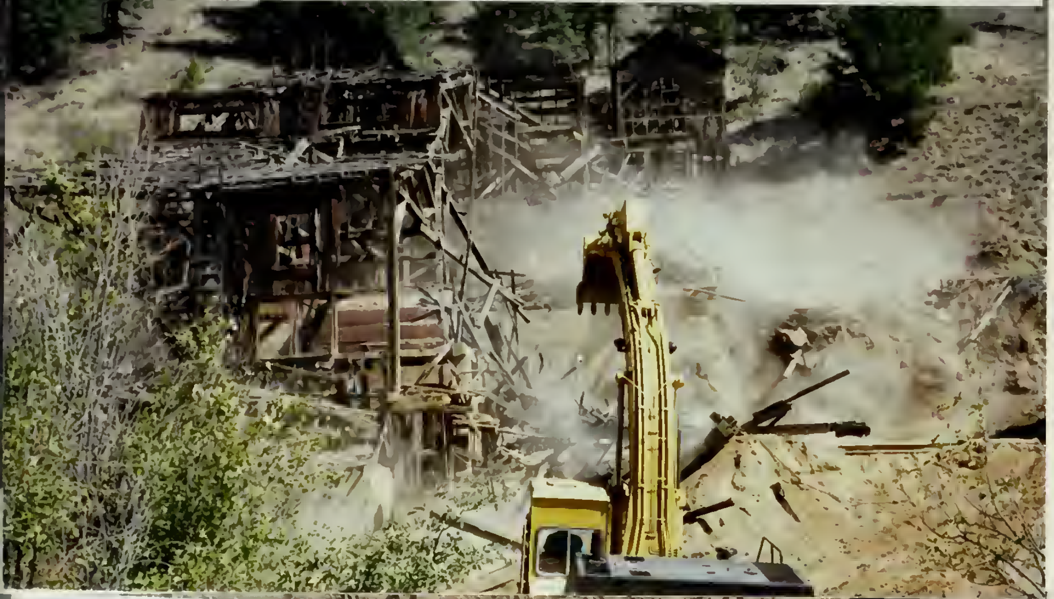
9/20/91 Removal of small flotation separator with dozer and excavator.



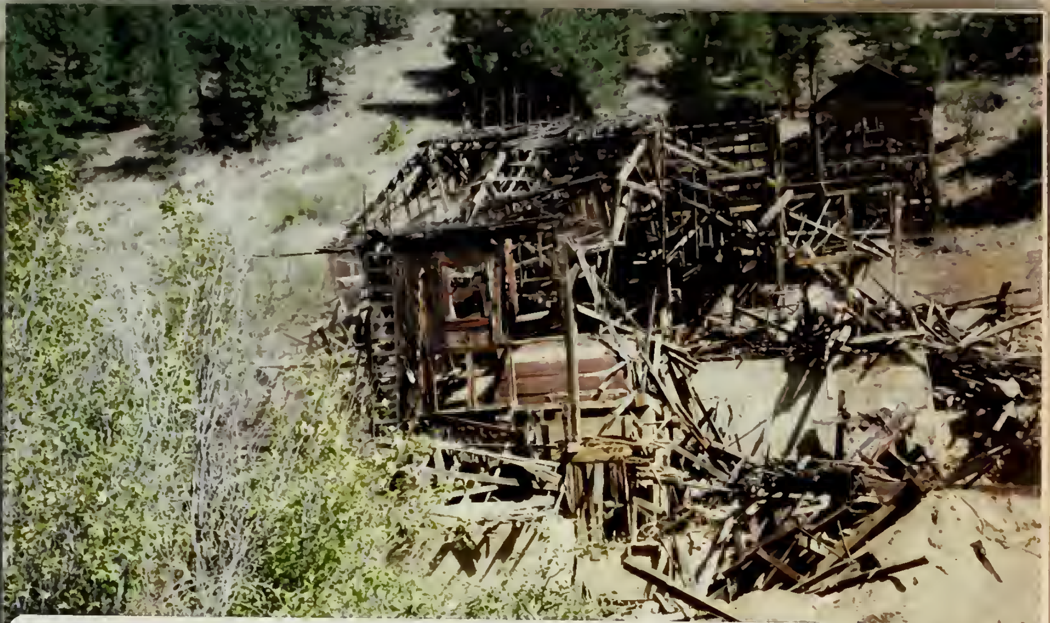
9/20/91 1 of 3 - Dismantling of mill building. Excavator shovel used to push over main support in lower right corner of building.



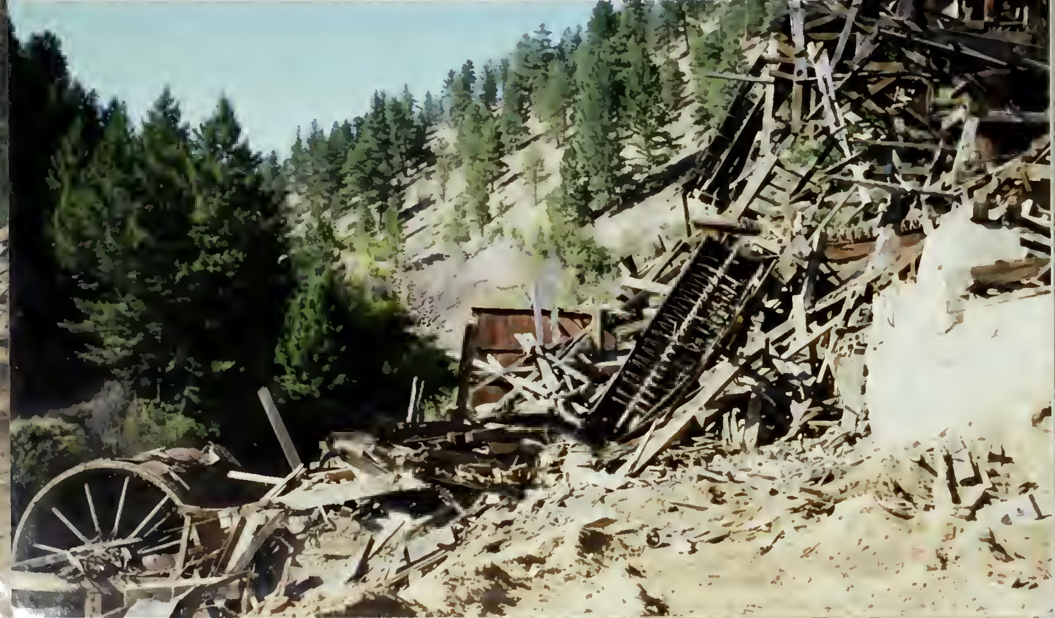
9/20/91 2 of 3 - Dismantling of mill building. Excavator shovel used to push over main support in lower right corner of building.



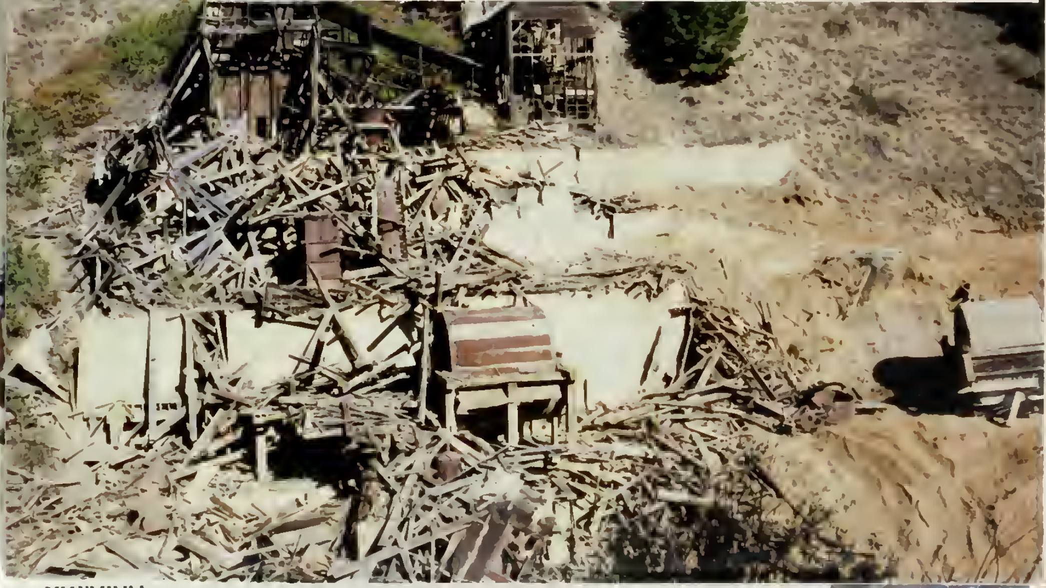
9/20/91 3 of 3 - Dismantling of mill building. Excavator shovel used to push over main support in lower right corner of building.



9/20/91 Dismantling of mill building. Timbers to be salvaged were removed first.

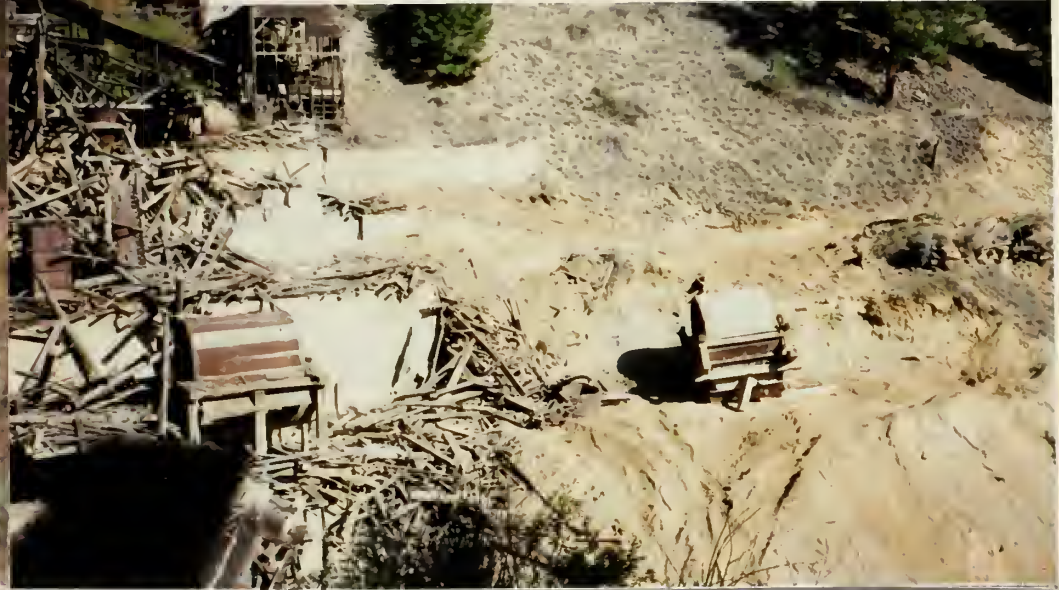


9/20/91 Dismantling of mill building. Large Flotation Separator in lower left corner still intact.

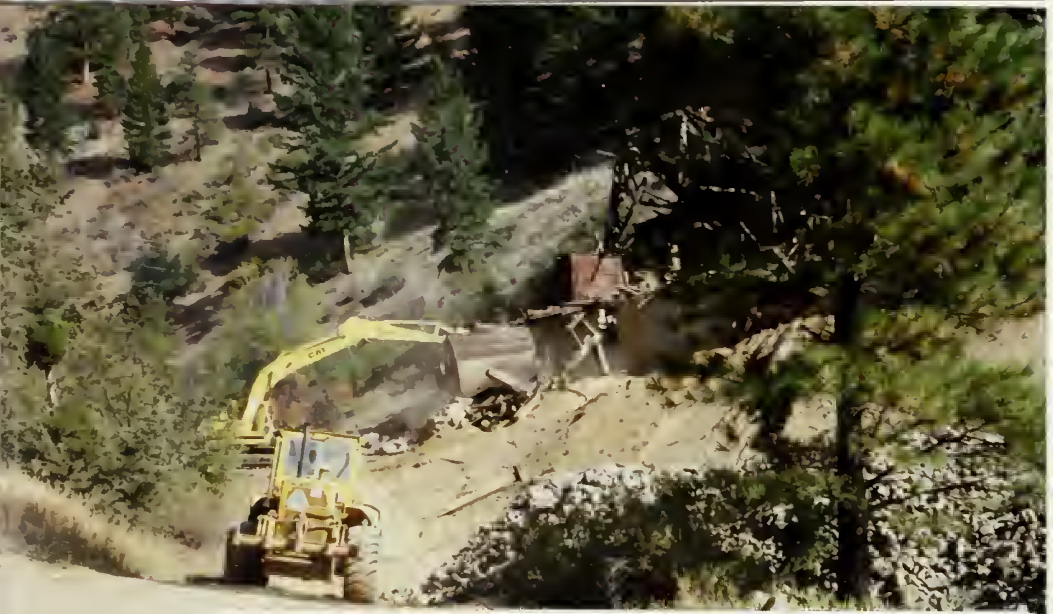


9/20/91 Dismantling of mill building. Small flotation separator at right with support timbers and hopper still attached.

9/20/91 Small flotation separator at right with support timbers and hopper attached. View looking toward cyanide mixing vat.

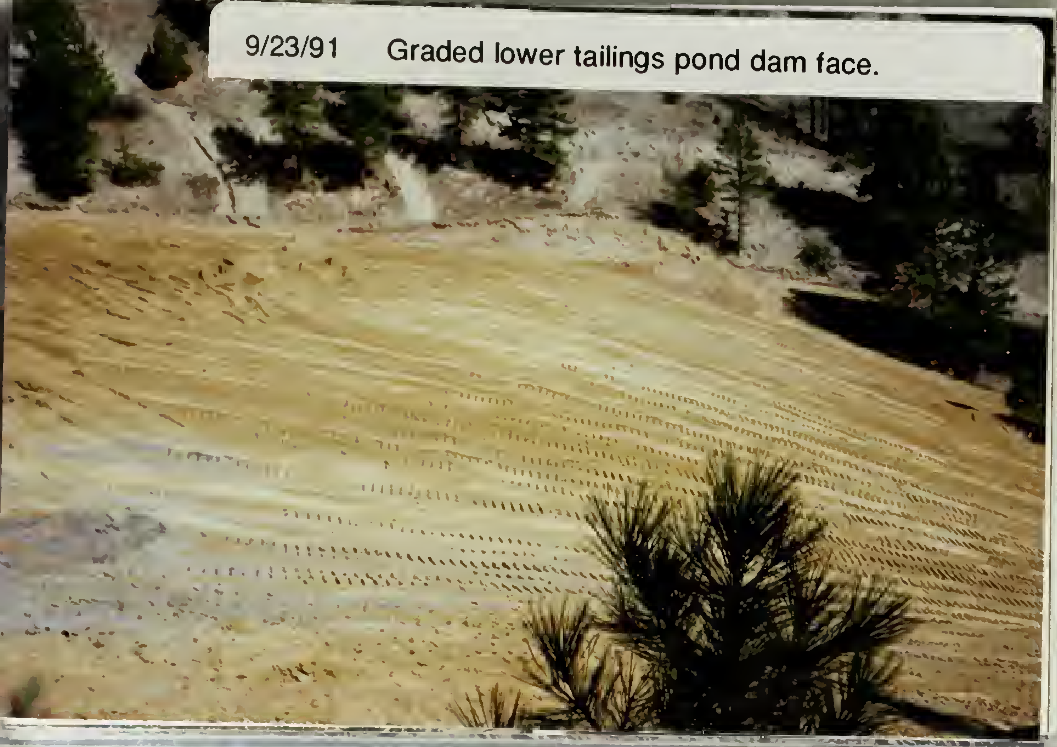


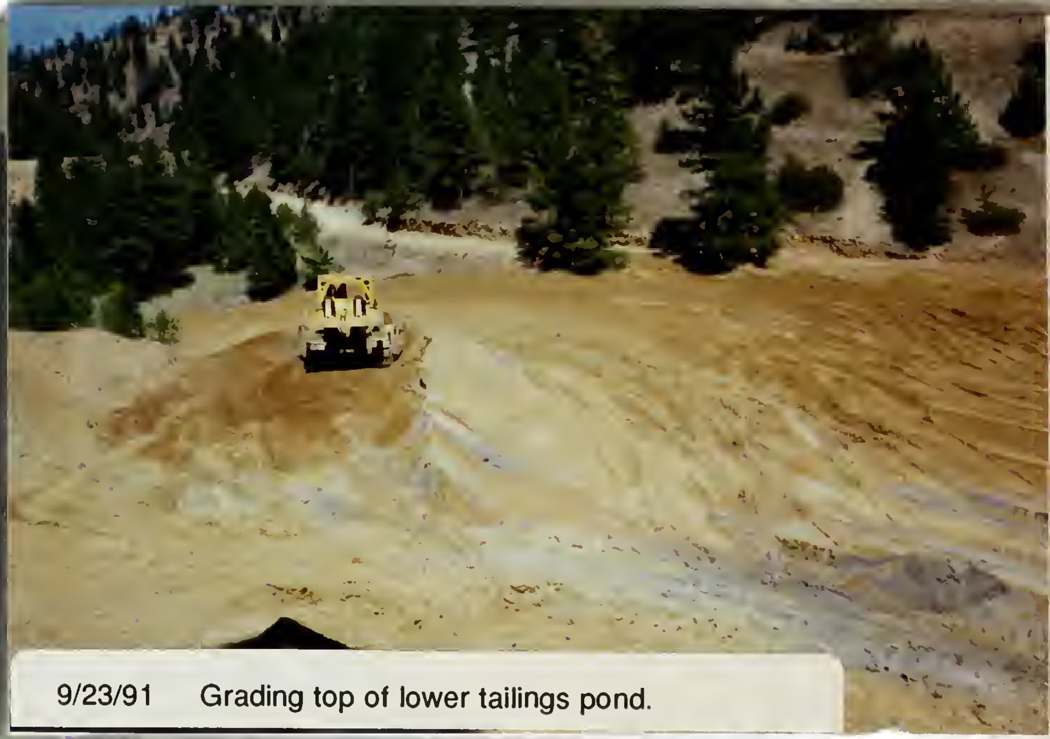
9/23/91 Grading of lower tailings pond.

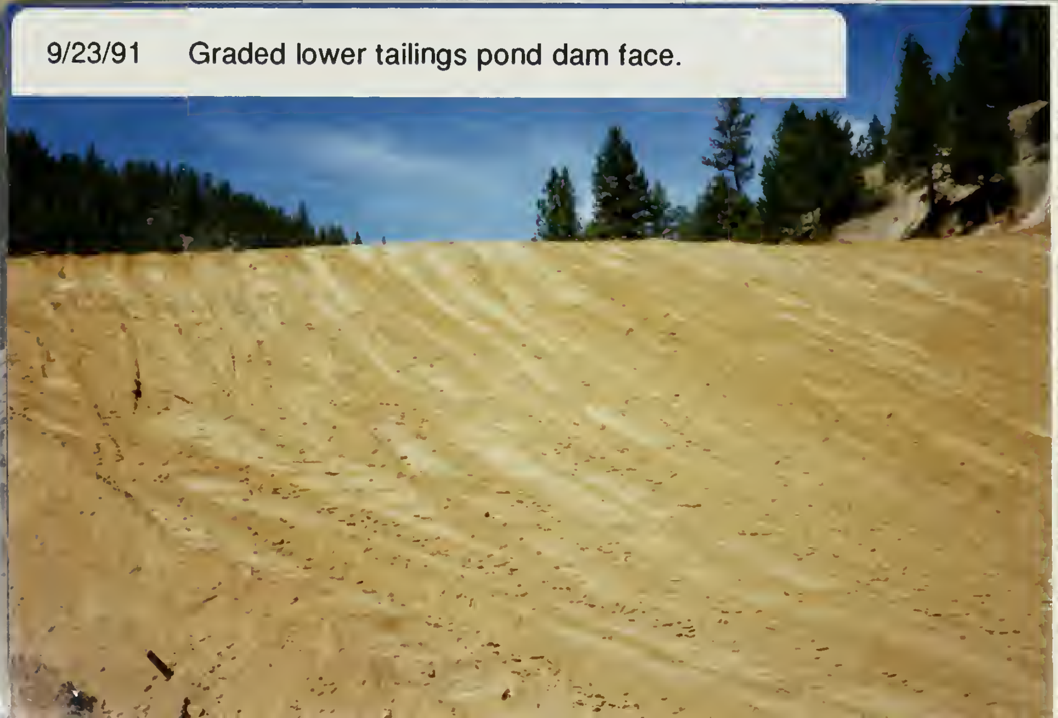


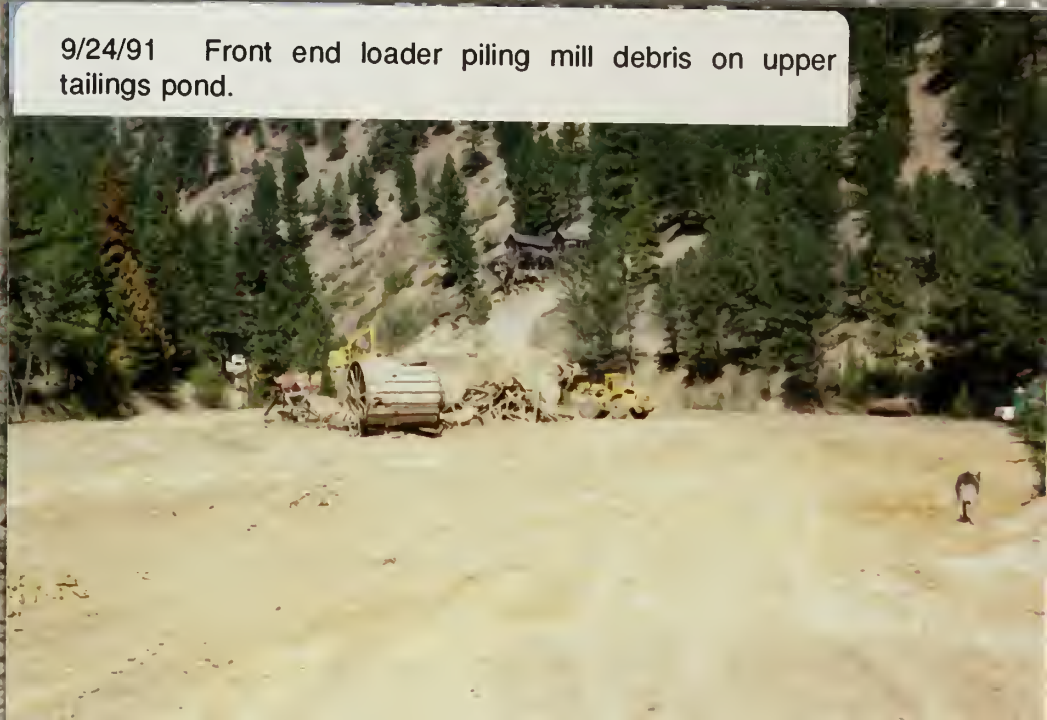
9/23/91 Dismantling of mill building. Note large Flotation Separator which was not salvaged.

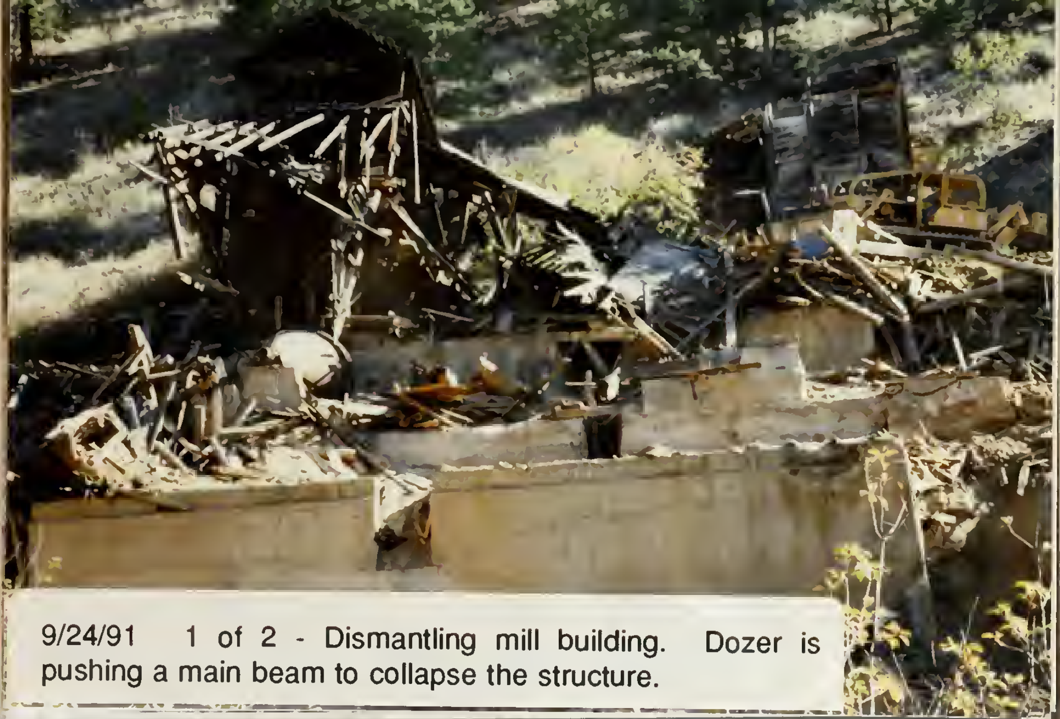
9/23/91 Breaking large Flotation Separator for burning.


9/23/91 Graded lower tailings pond dam face.

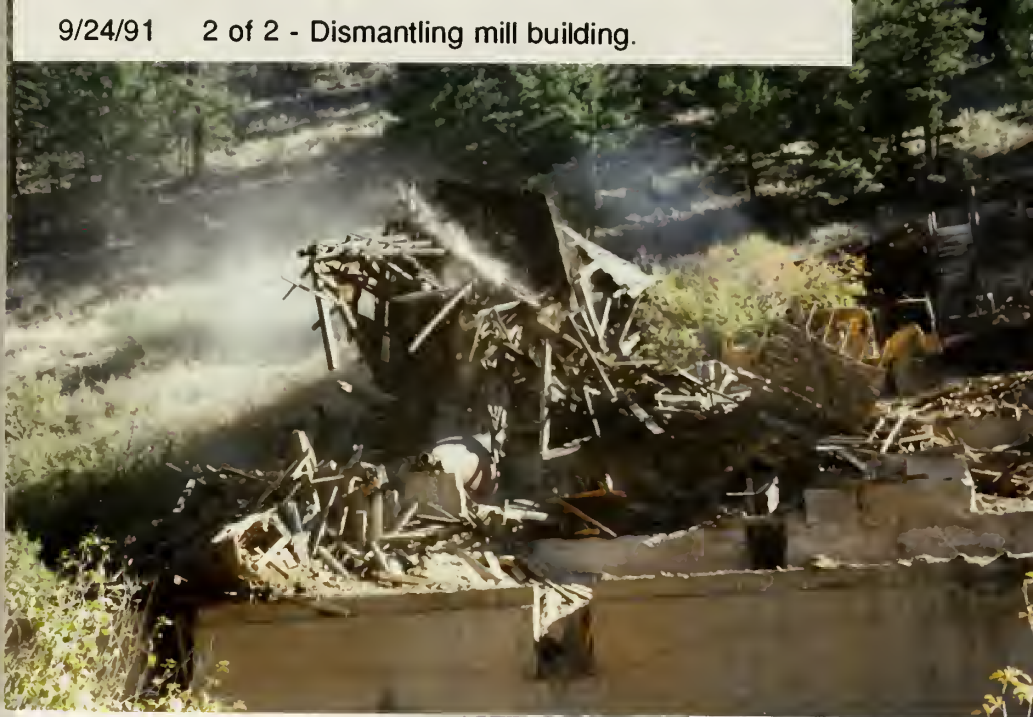

9/23/91 Grading top of lower tailings pond.


9/23/91 Graded lower tailings pond dam face.

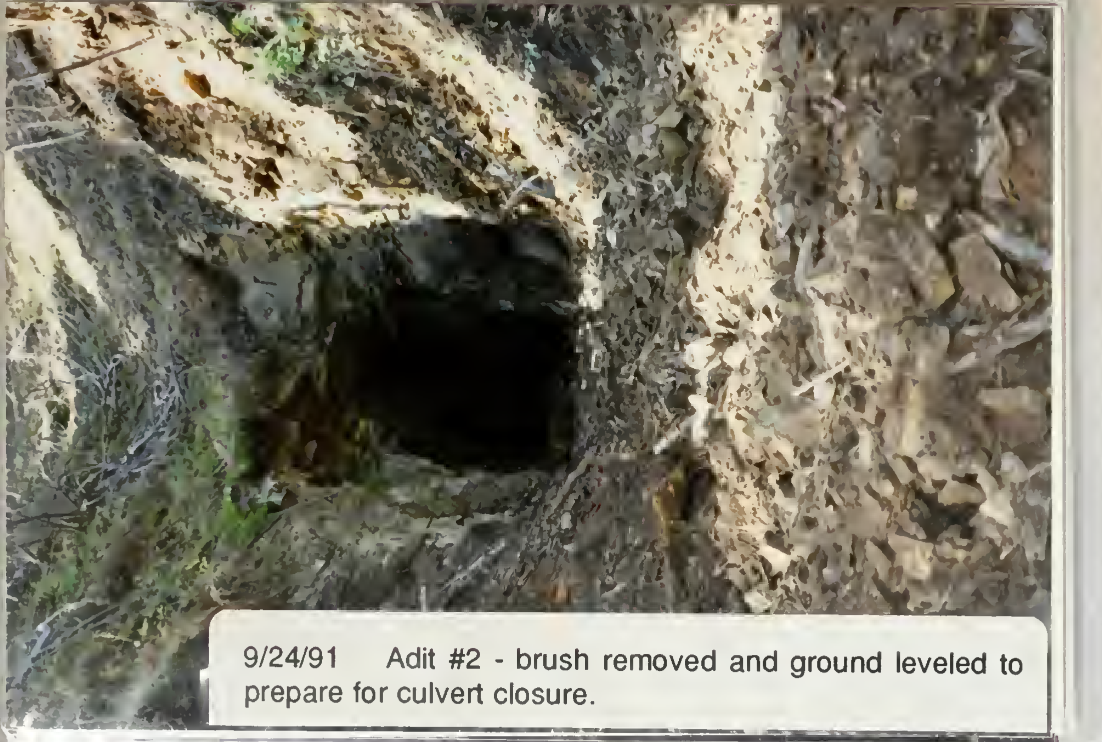

9/24/91 Front end loader piling mill debris on upper tailings pond.



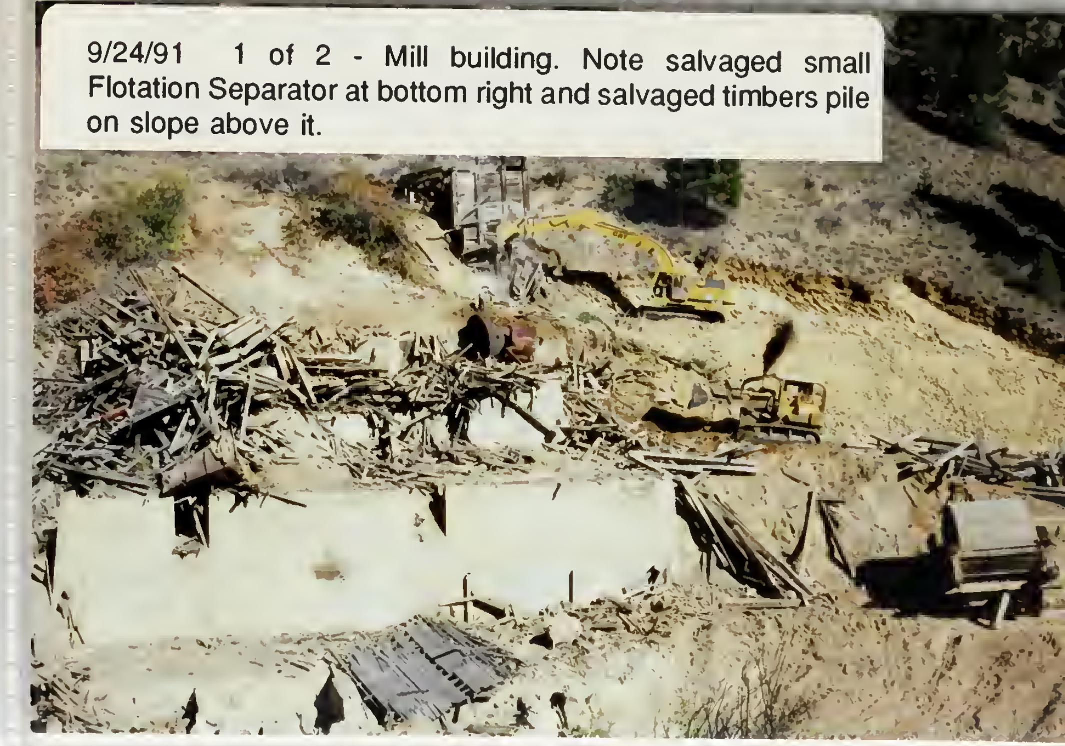
9/24/91 1 of 2 - Dismantling mill building. Dozer is pushing a main beam to collapse the structure.



9/24/91 2 of 2 - Dismantling mill building.

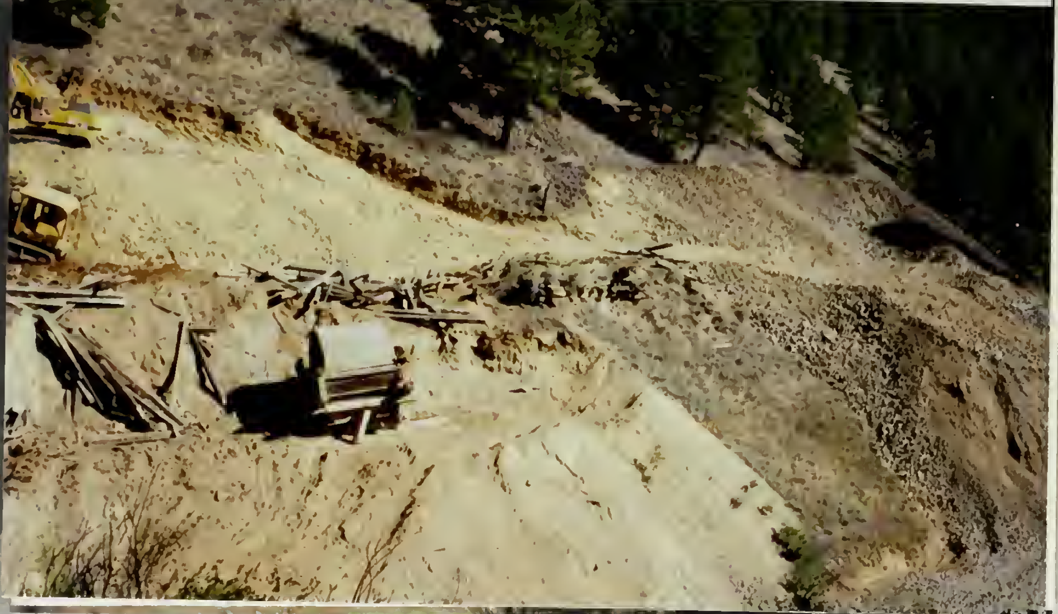


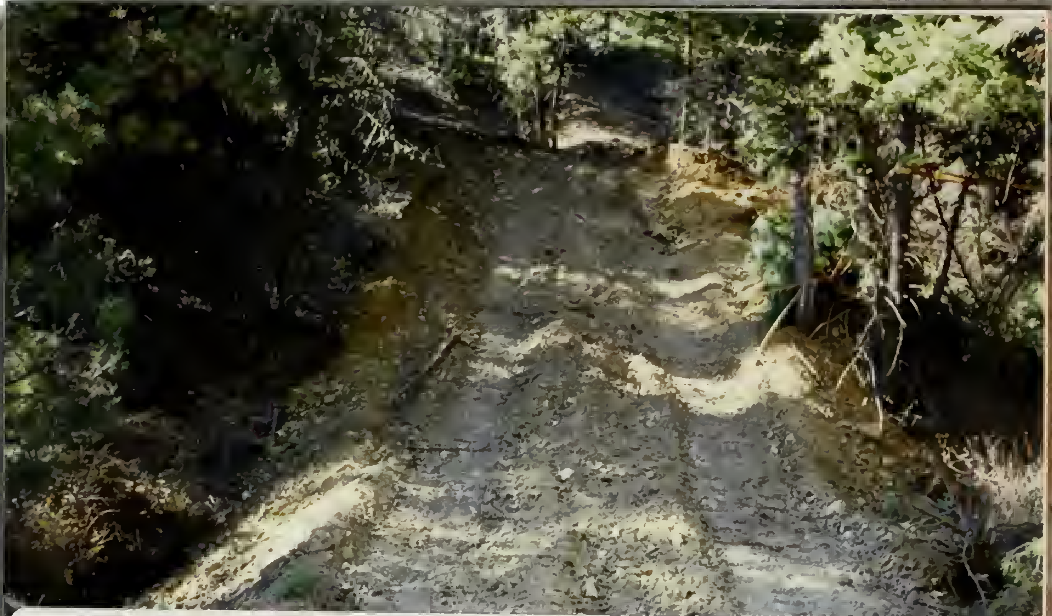
9/24/91 Adit #2 - brush removed and ground leveled to prepare for culvert closure.



9/24/91 1 of 2 - Mill building. Note salvaged small Flotation Separator at bottom right and salvaged timbers pile on slope above it.

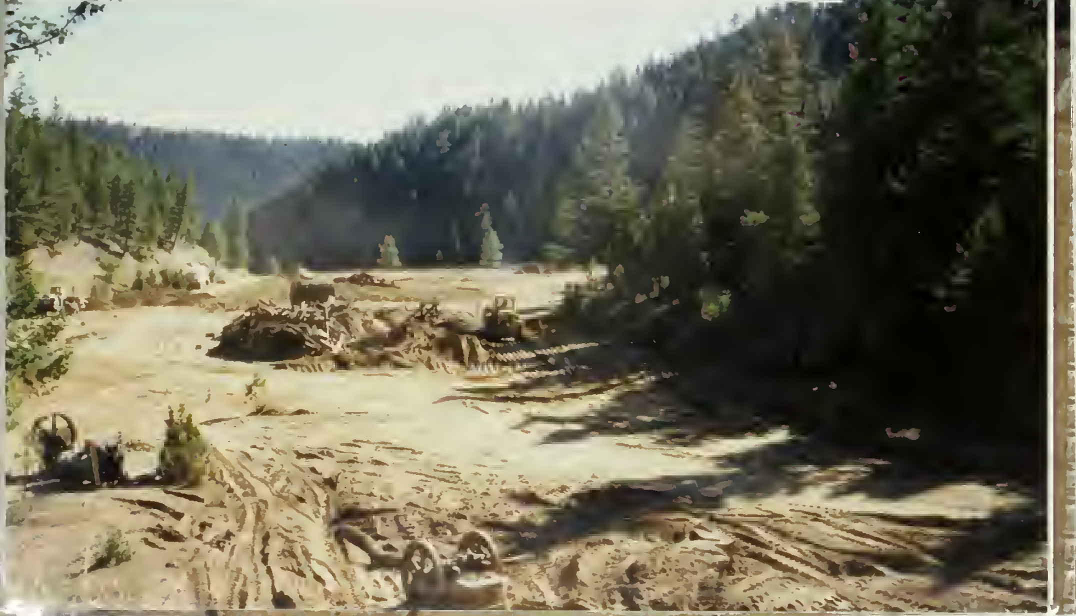
9/24/91 2 of 2 - Mill building. Waste rock pile #2 to south of mill. This is the source for Type 1 and 2 riprap.



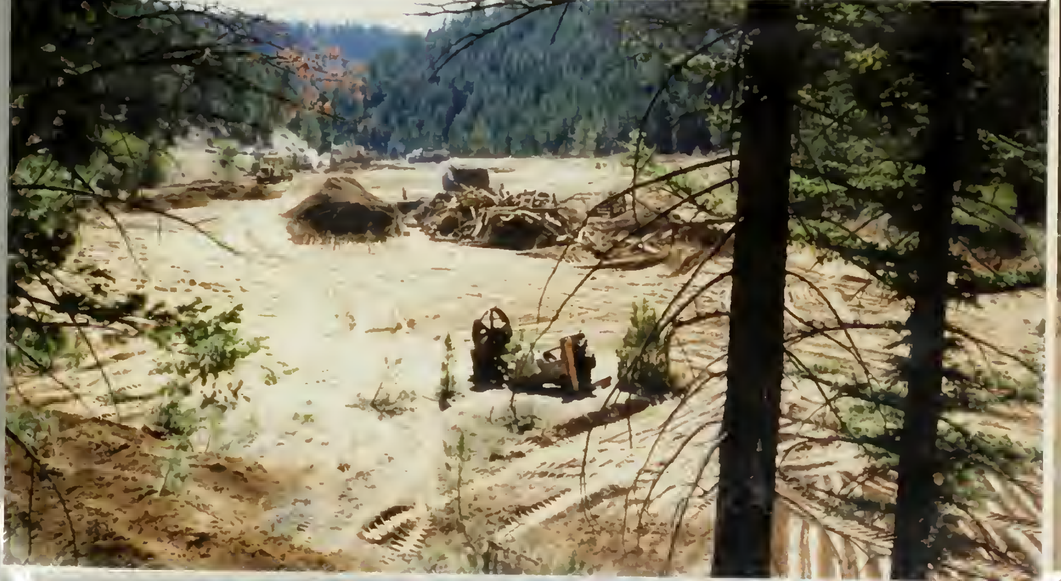


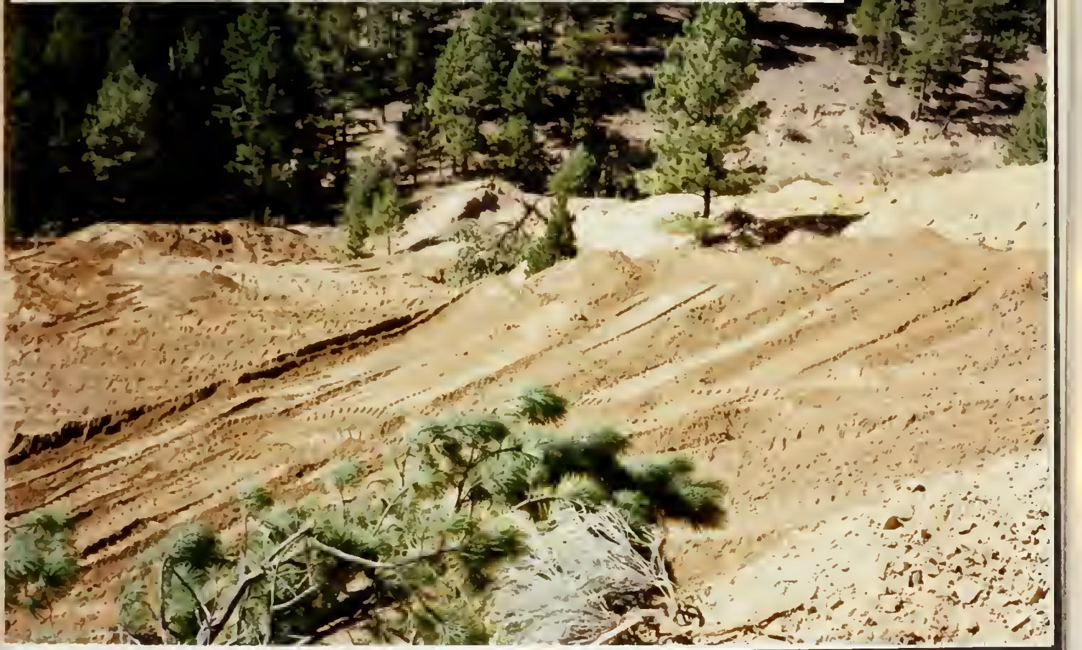
9/24/91 Adit #1 slope graded to facilitate placement of rock in adit.

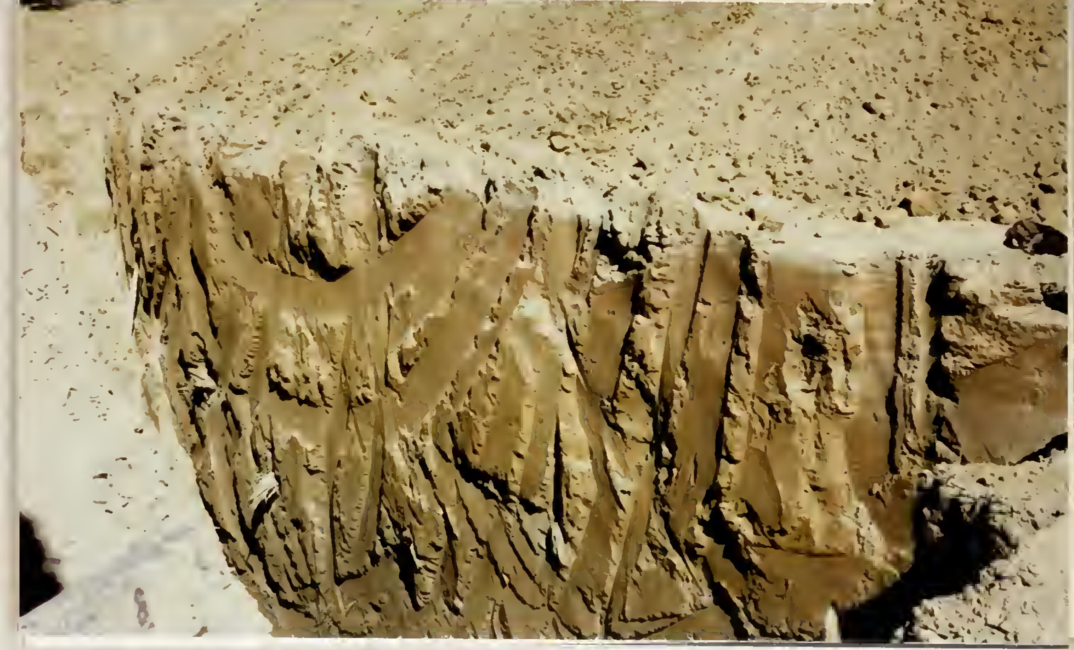
9/25/91 Upper tailings pond looking south. Debris piled for burning. Note salvaged cone and jaw crushers at lower left.

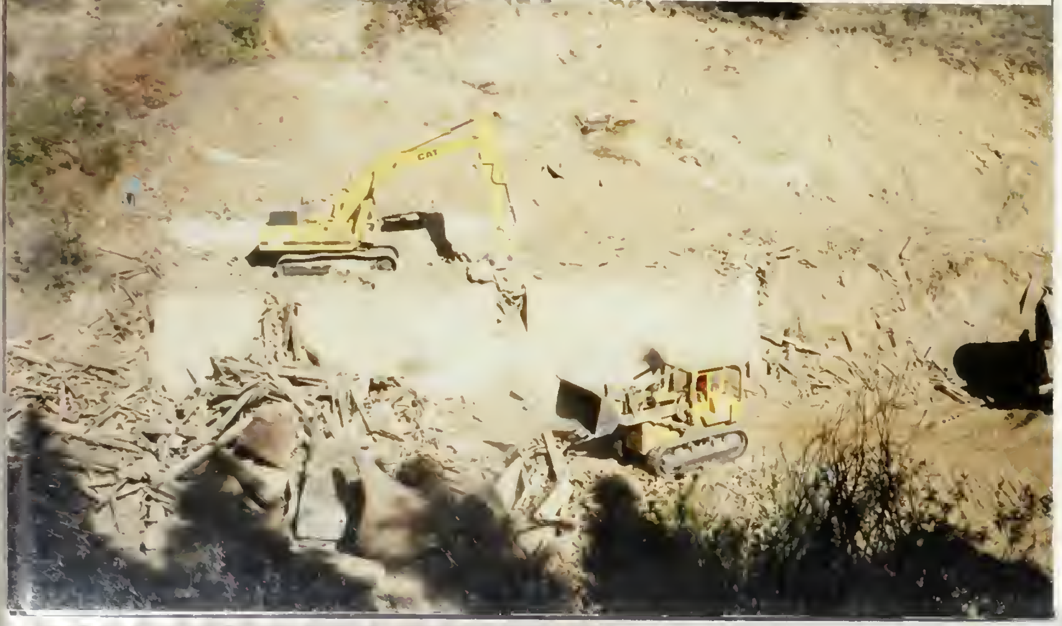


9/25/91 Upper tailings pond looking southwest. Trench was dug and mill debris was pushed into trench for safer burning.



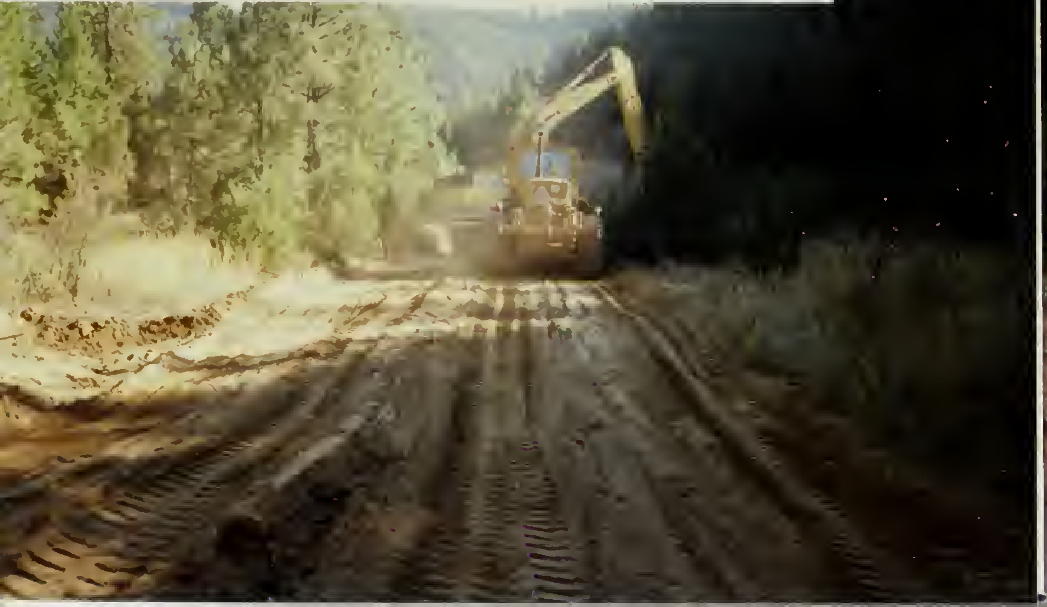

9/25/91 Grading upper tailings pond dam face.


9/25/91 Profile of trench in upper tailings pond.


9/25/91 Mill building completely dismantled except for concrete foundations.

9/27/91 Excavator clearing area for channel between the upper and lower tailings ponds.

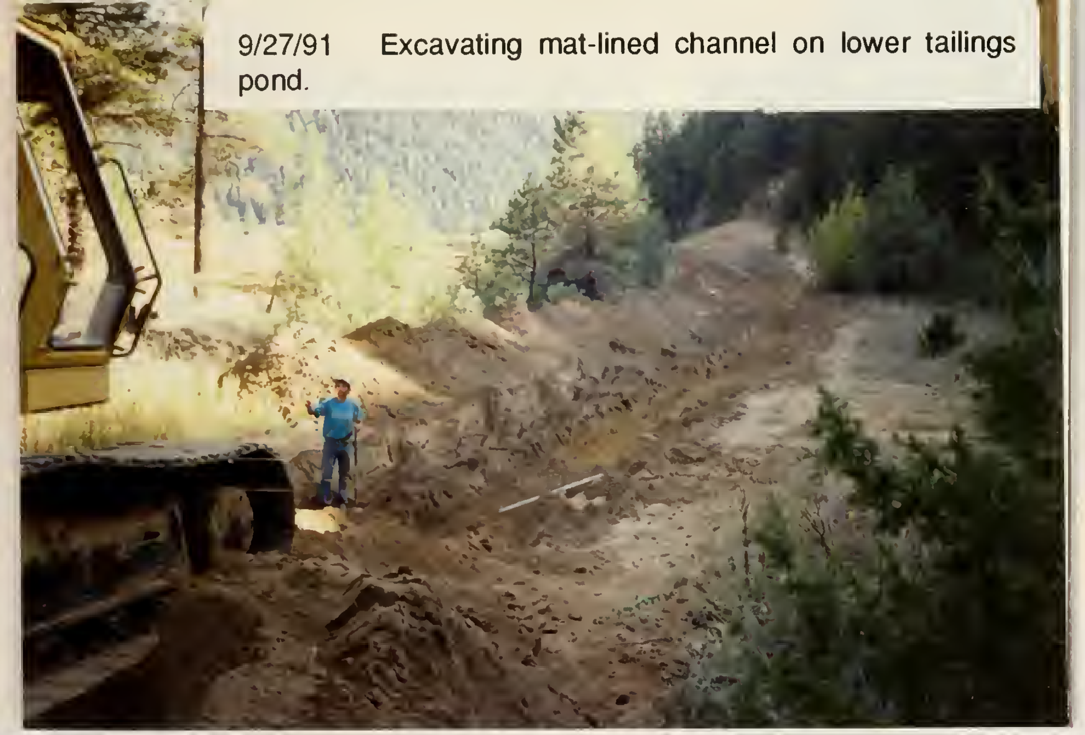
9/27/91 Excavator and front end loader clearing area for channel between upper and lower tailings ponds.



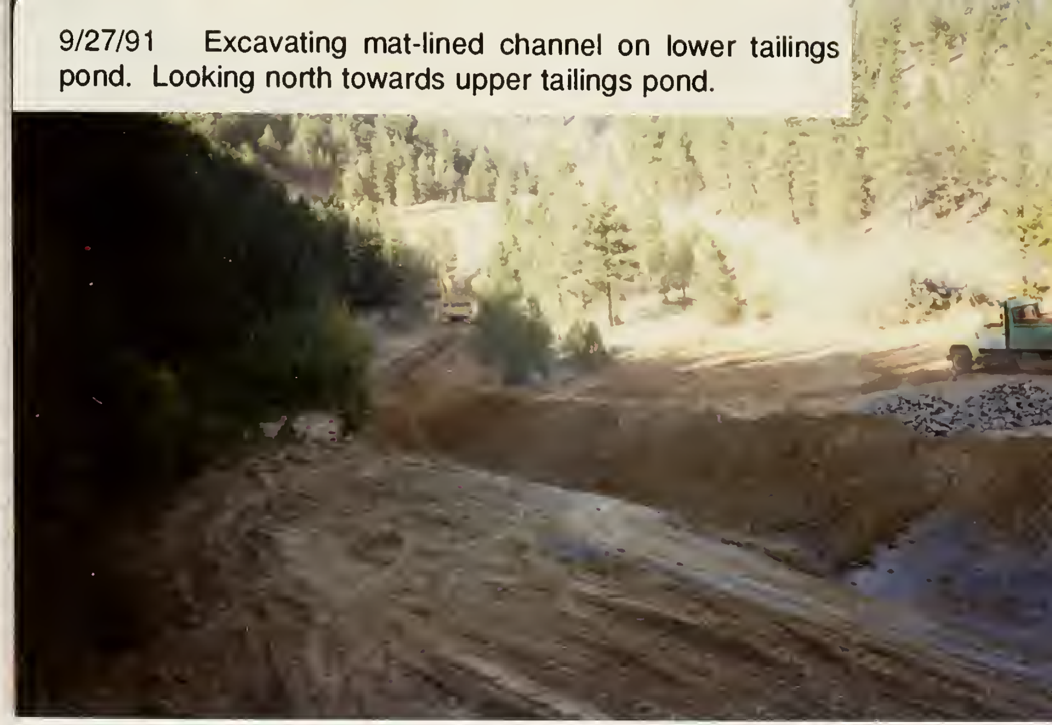
9/27/91 Cleared area for mat-lined channel looking north towards graded face of upper tailings pond.

9/27/91 Cleared area for mat-lined channel looking north towards graded face of upper tailings pond.

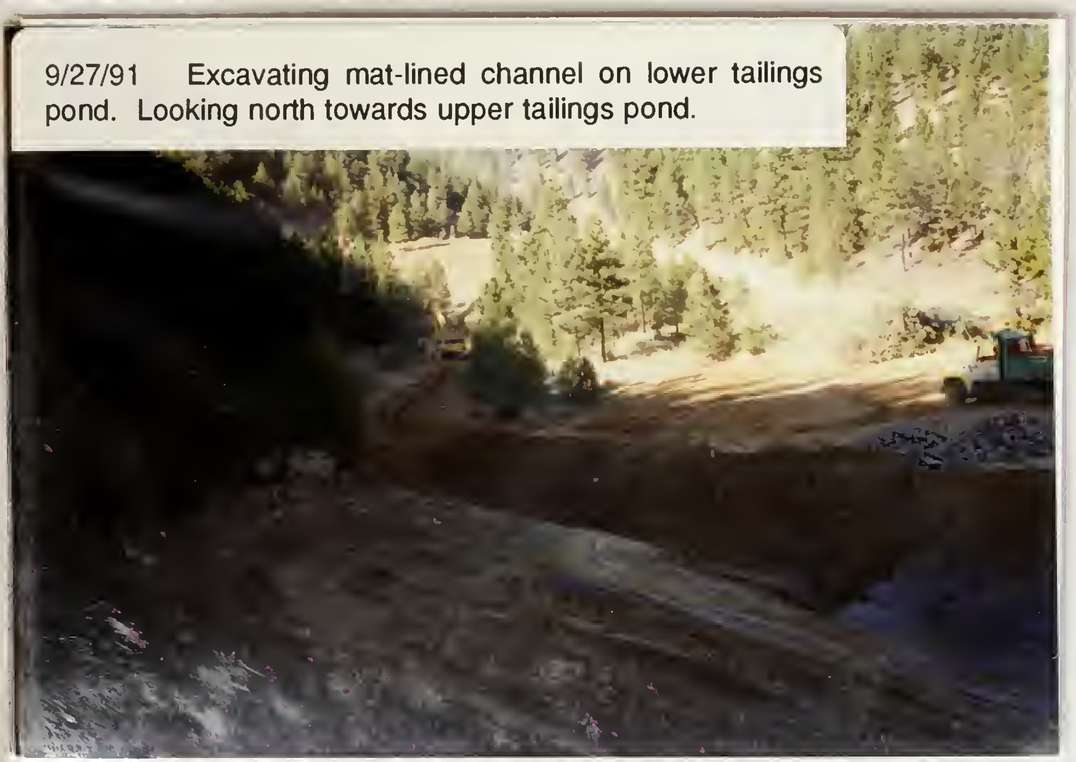
9/27/91 Stakes laid for upper tailings pond riprap channel.



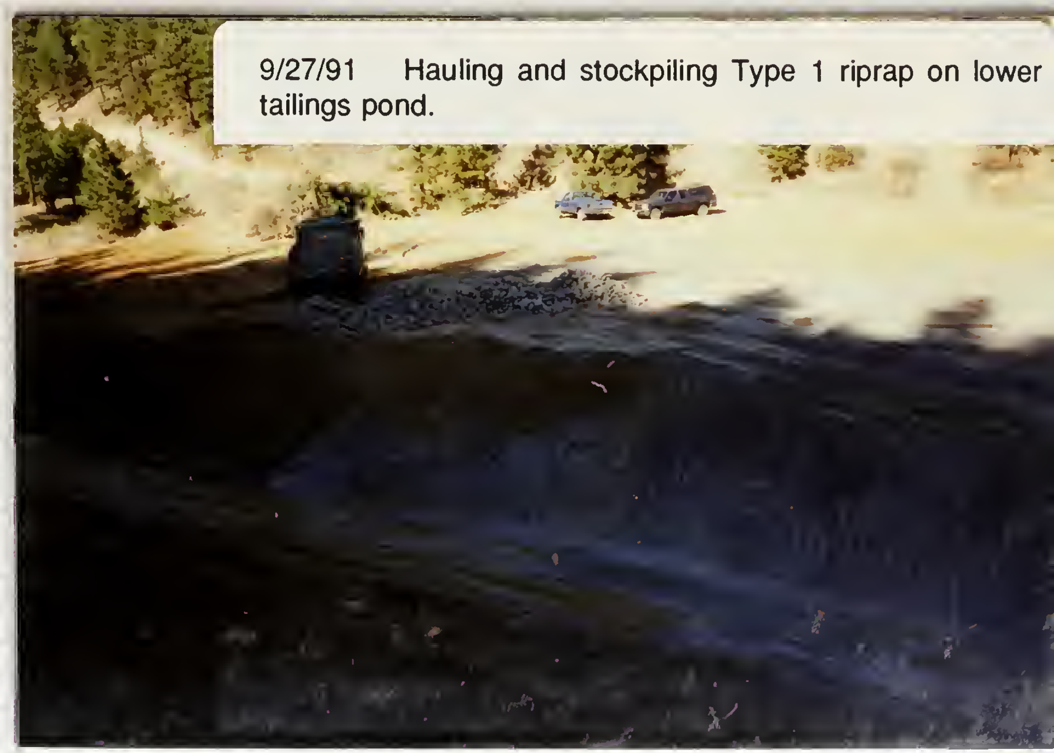
9/27/91 Excavating mat-lined channel on lower tailings pond.



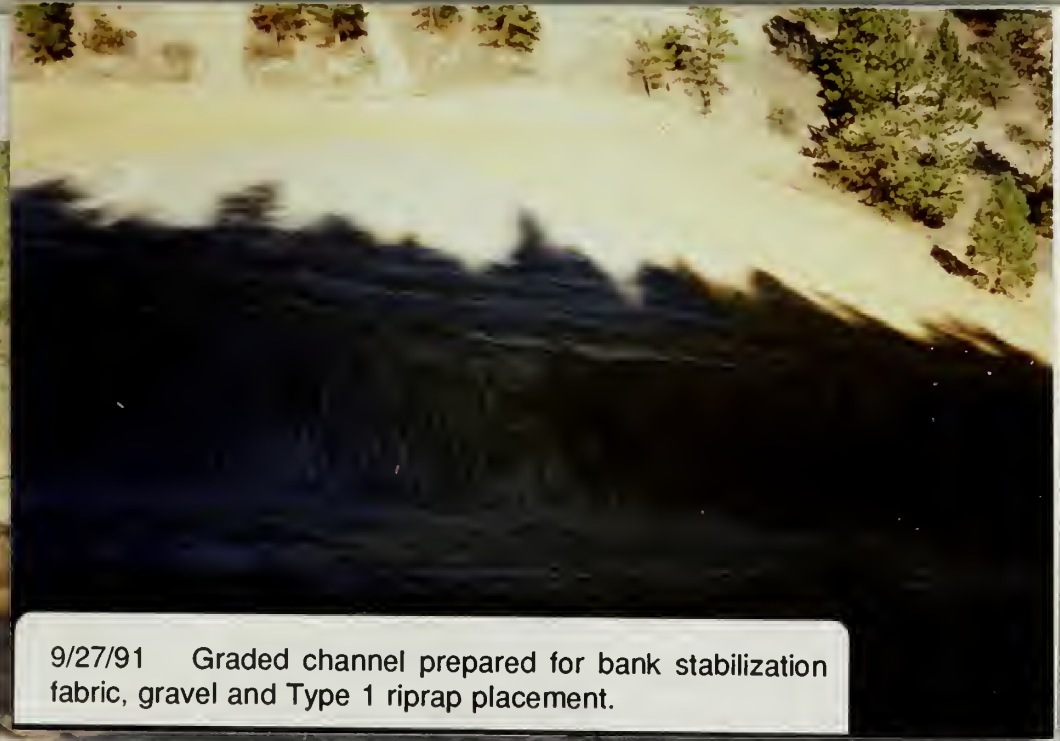
9/27/91 Excavating mat-lined channel on lower tailings pond. Looking north towards upper tailings pond.



9/27/91 Excavating mat-lined channel on lower tailings pond. Looking north towards upper tailings pond.

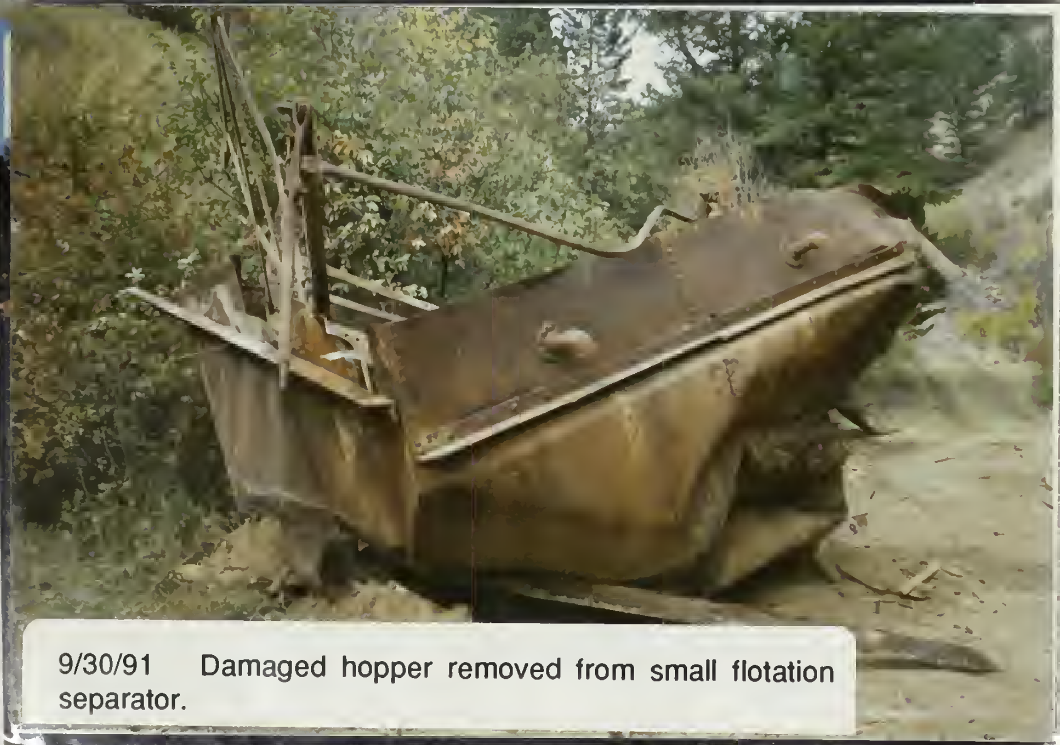


9/27/91 Hauling and stockpiling Type 1 riprap on lower tailings pond.



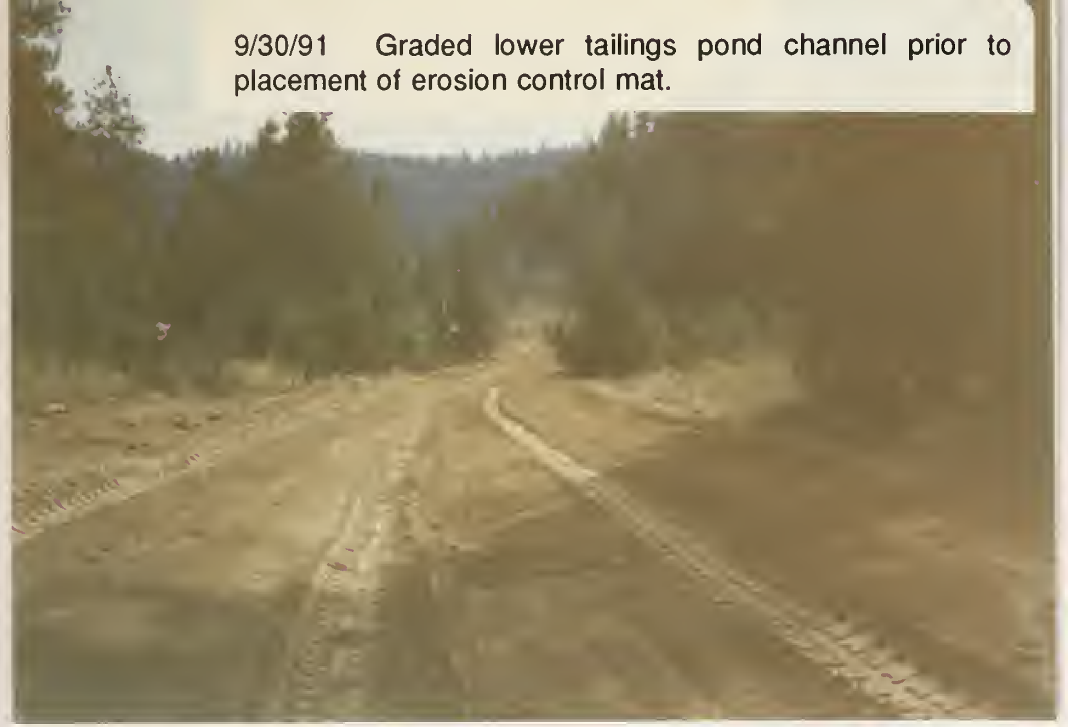
9/27/91 Graded channel prepared for bank stabilization fabric, gravel and Type 1 riprap placement.

9/27/91 Graded channel prepared for bank stabilization fabric, Type 5 and Type 1 riprap placement.

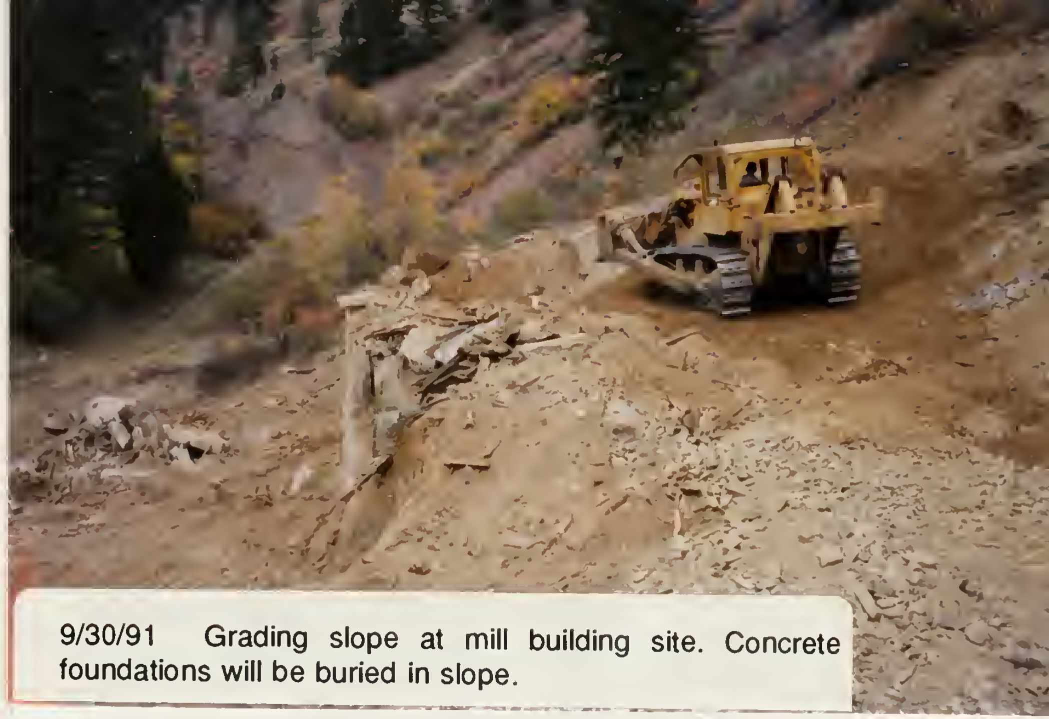


9/30/91 Damaged hopper removed from small flotation separator.

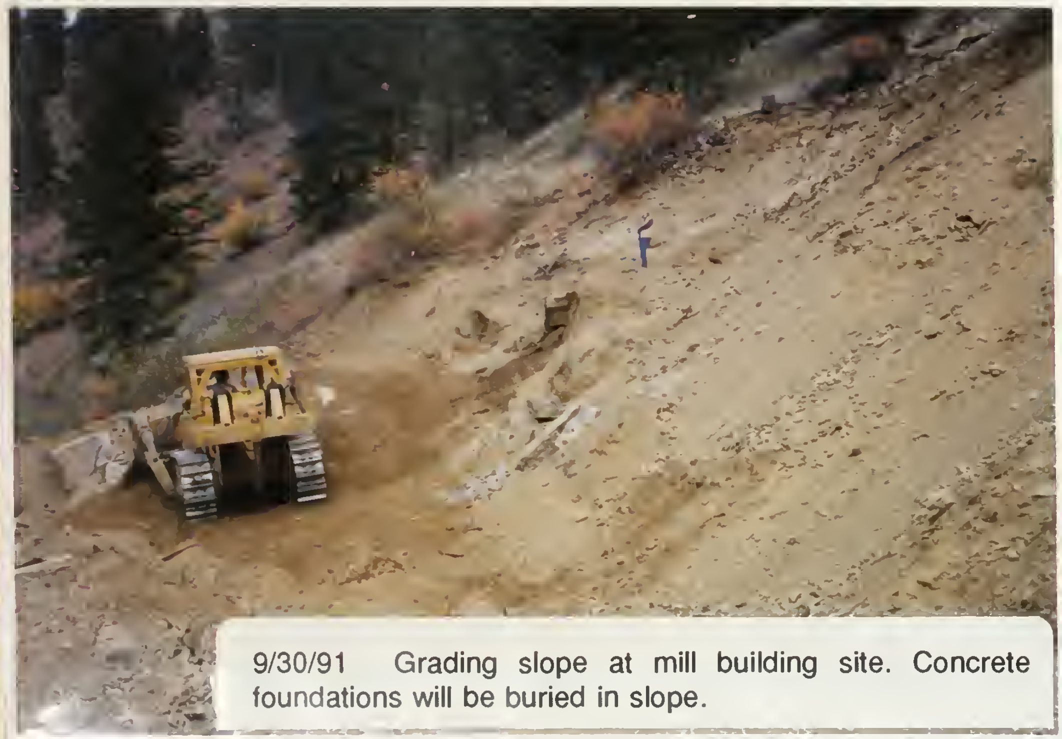
9/30/91 Damaged hopper removed from small flotation separator.



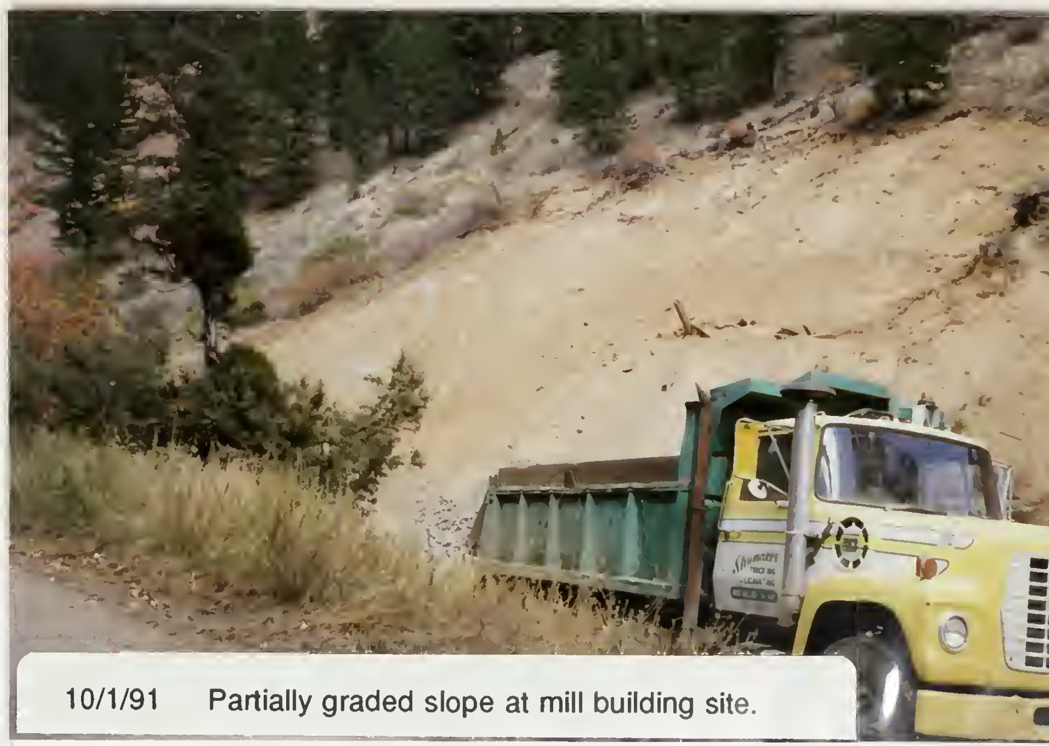
9/30/91 Graded lower tailings pond channel prior to placement of erosion control mat.



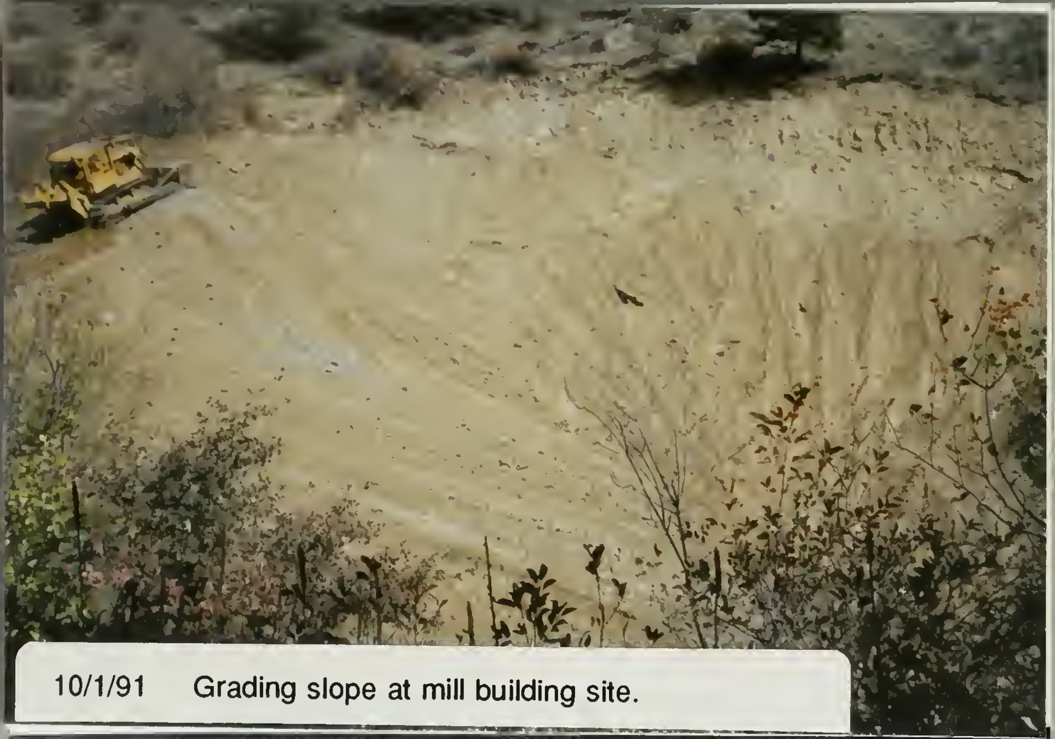
9/30/91 Grading slope at mill building site. Concrete foundations will be buried in slope.



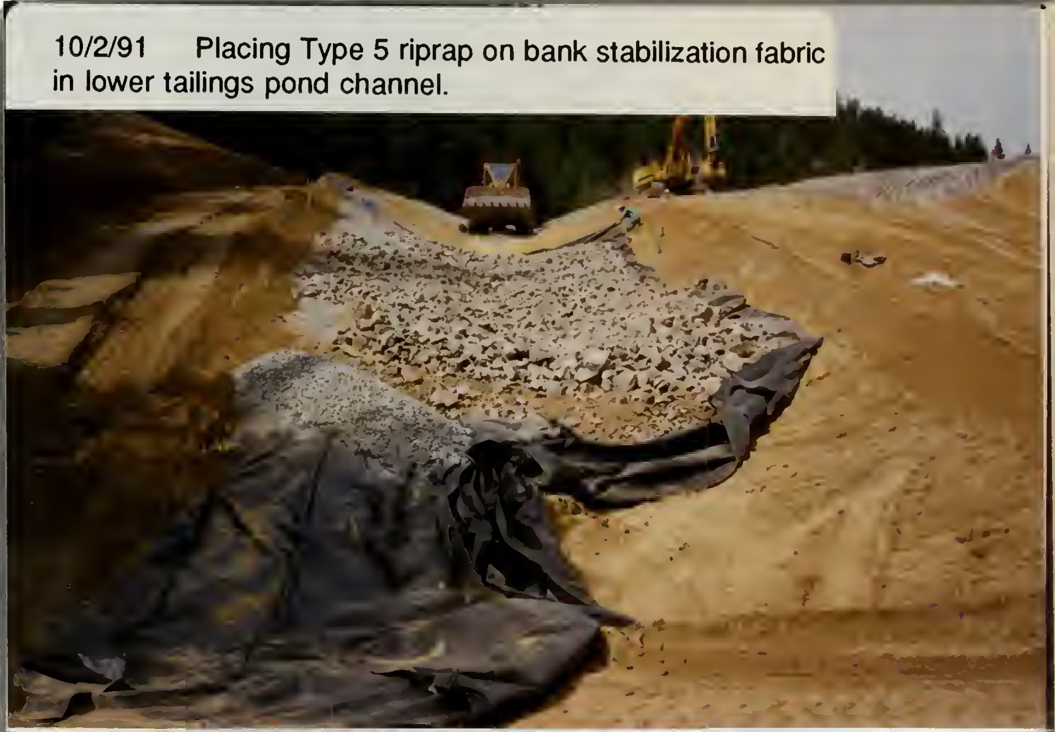
9/30/91 Grading slope at mill building site. Concrete foundations will be buried in slope.



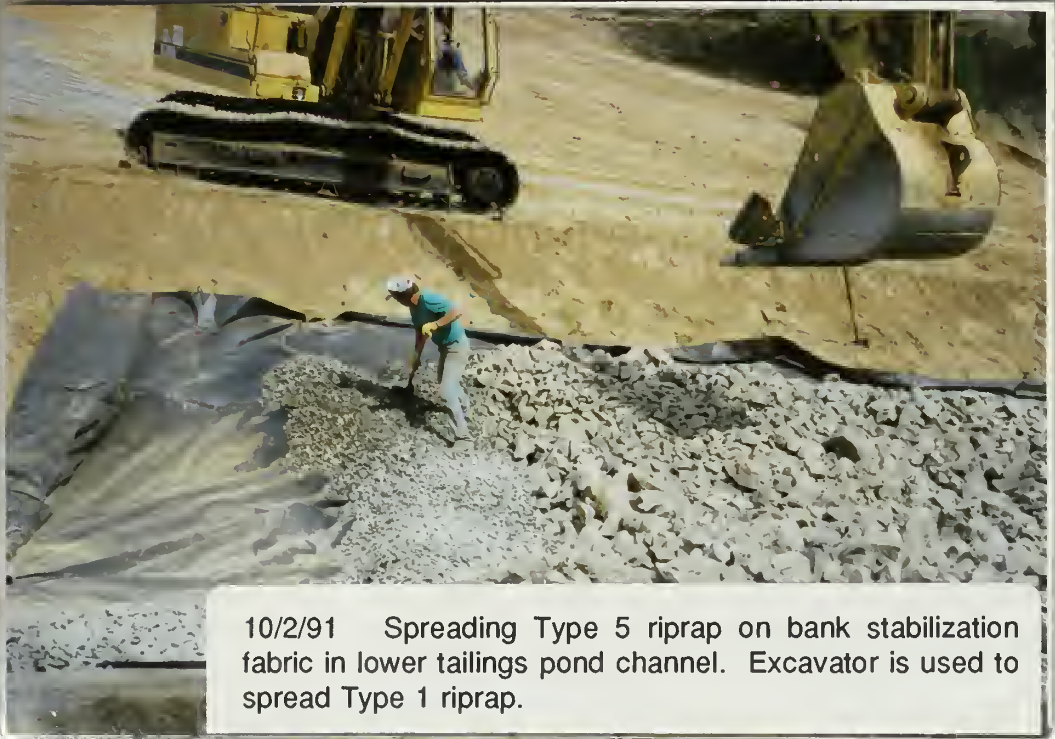
10/1/91 Partially graded slope at mill building site.



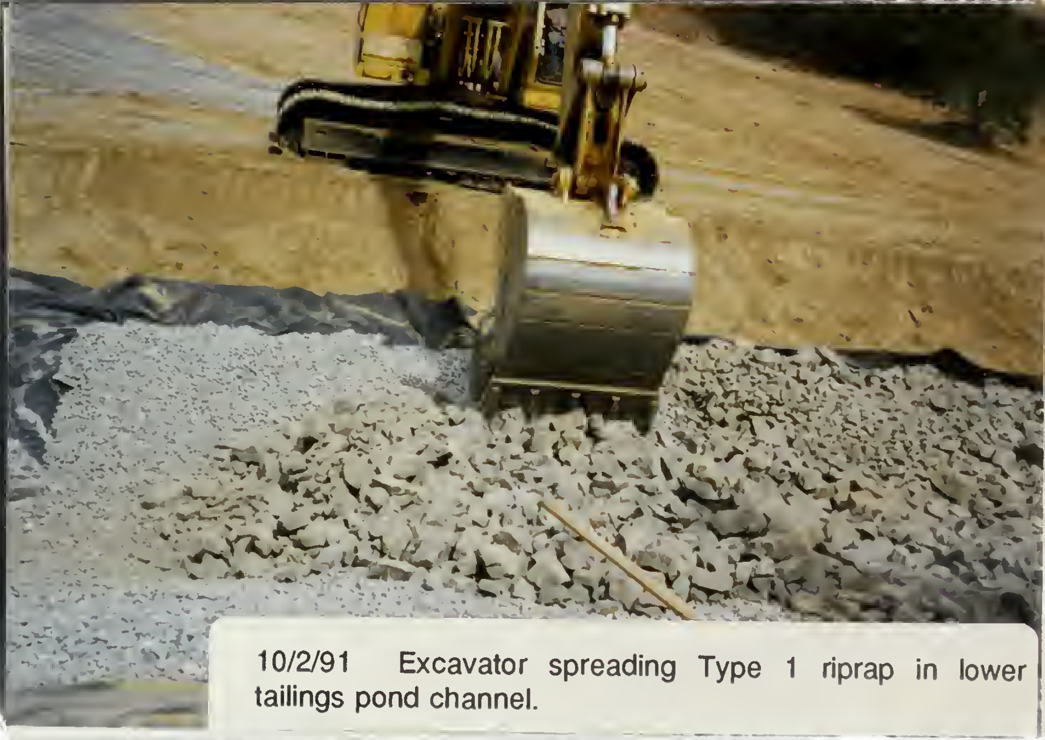
10/1/91 Grading slope at mill building site.



10/2/91 Placing Type 5 riprap on bank stabilization fabric in lower tailings pond channel.

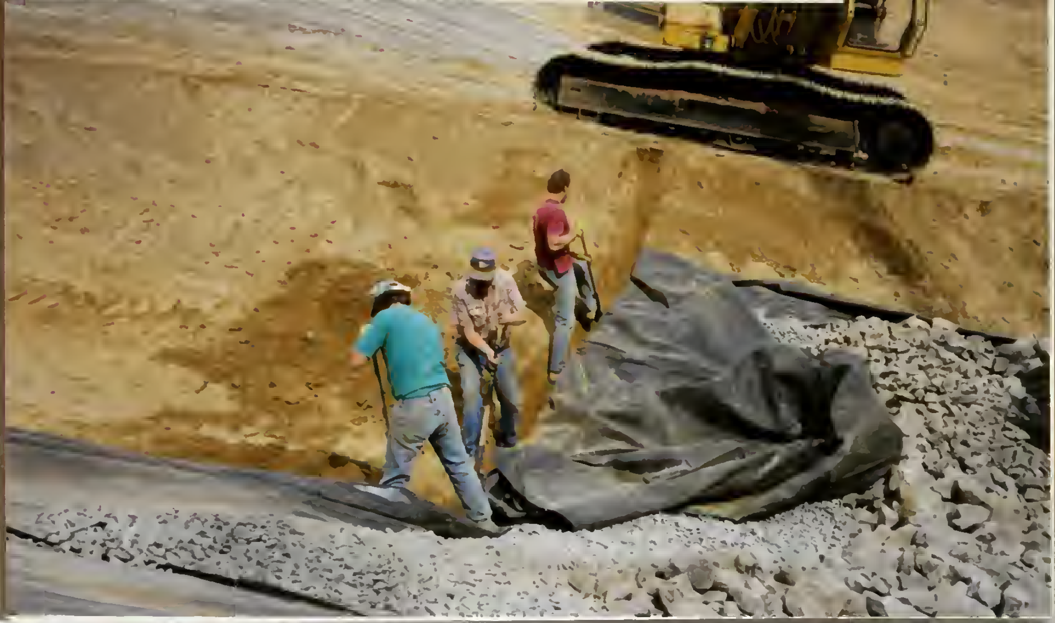


10/2/91 Spreading Type 5 riprap on bank stabilization fabric in lower tailings pond channel. Excavator is used to spread Type 1 riprap.

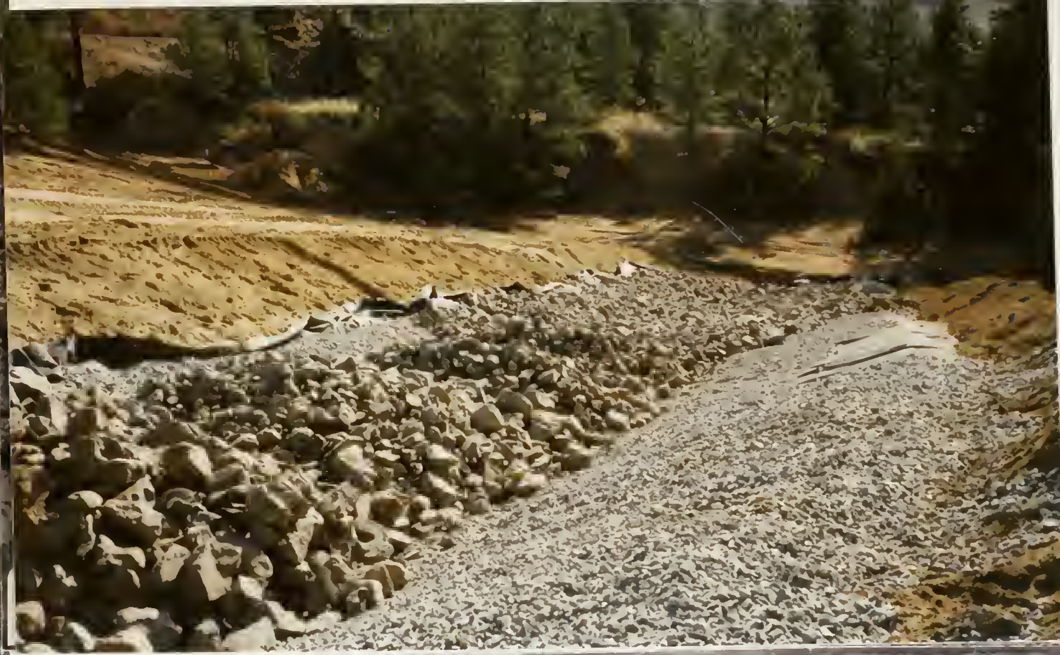


10/2/91 Excavator spreading Type 1 riprap in lower tailings pond channel.

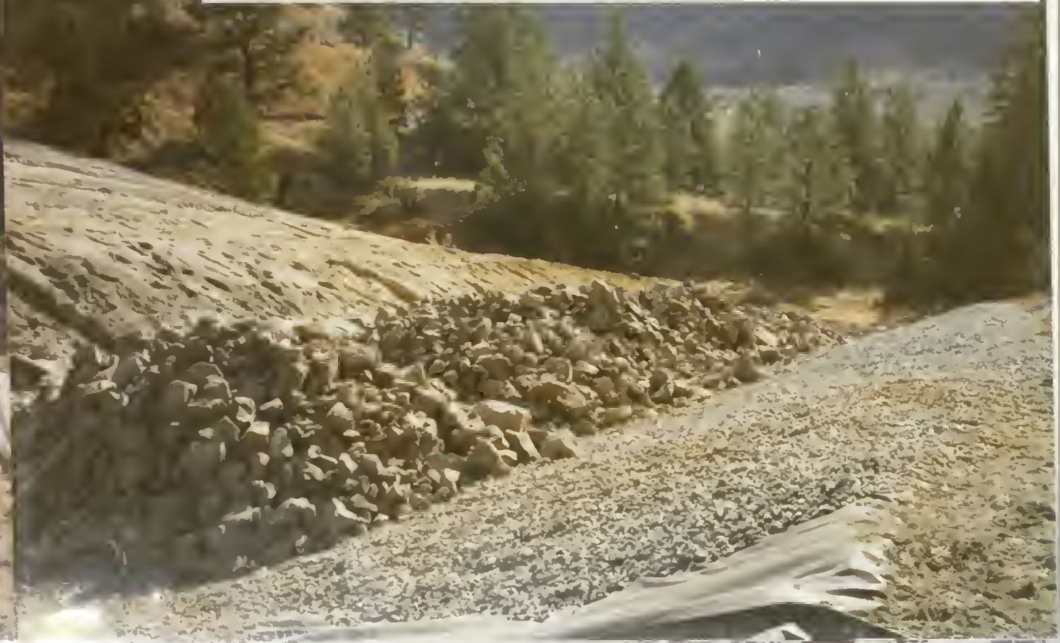
10/2/91 Digging a key trench in lower tailings pond channel.



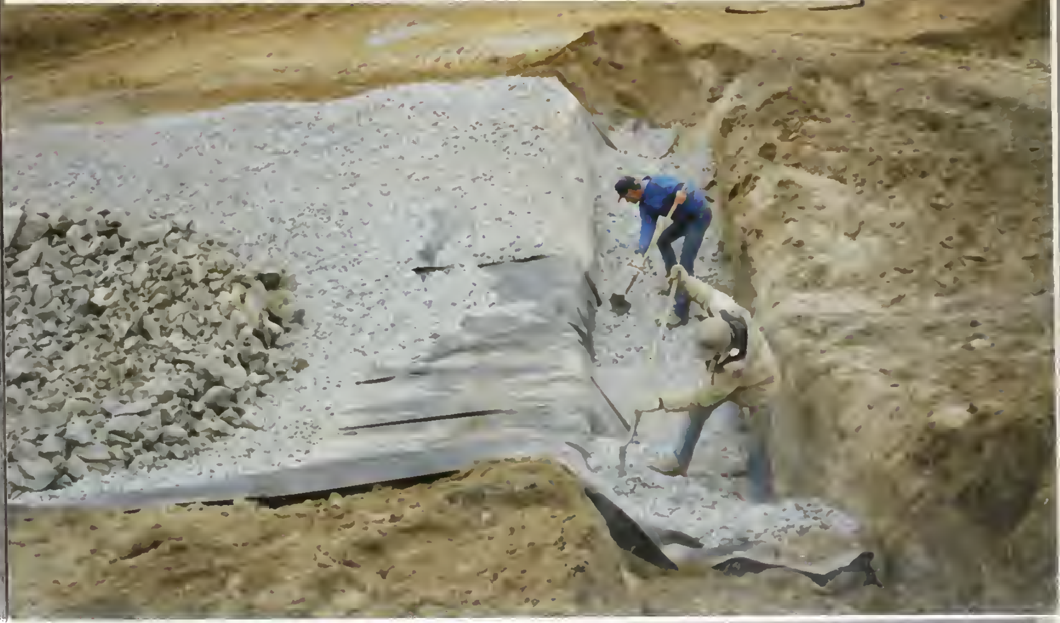
10/3/91 Riprap channel in lower tailings pond.

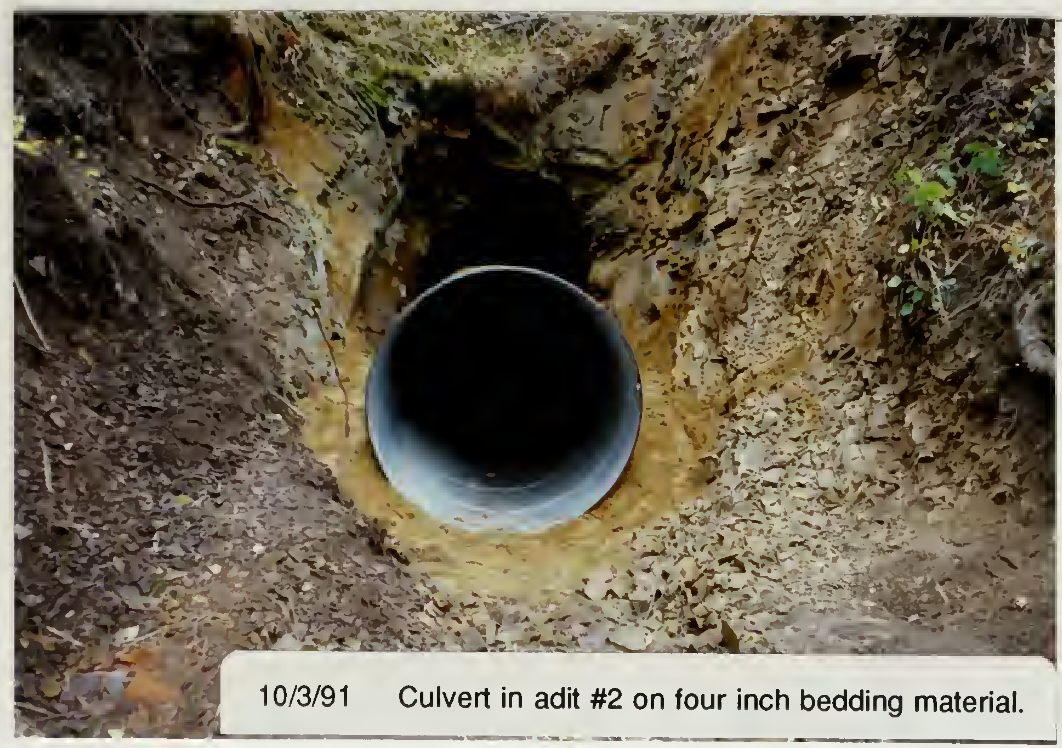


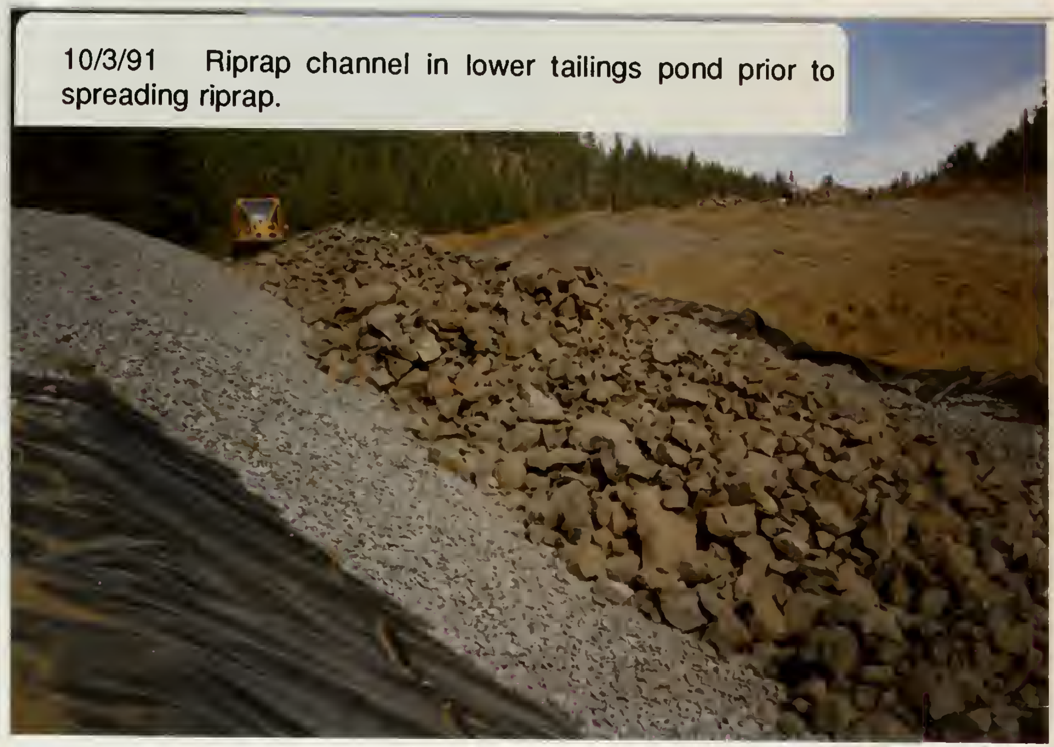
10/3/91 Riprap channel in lower tailings pond.

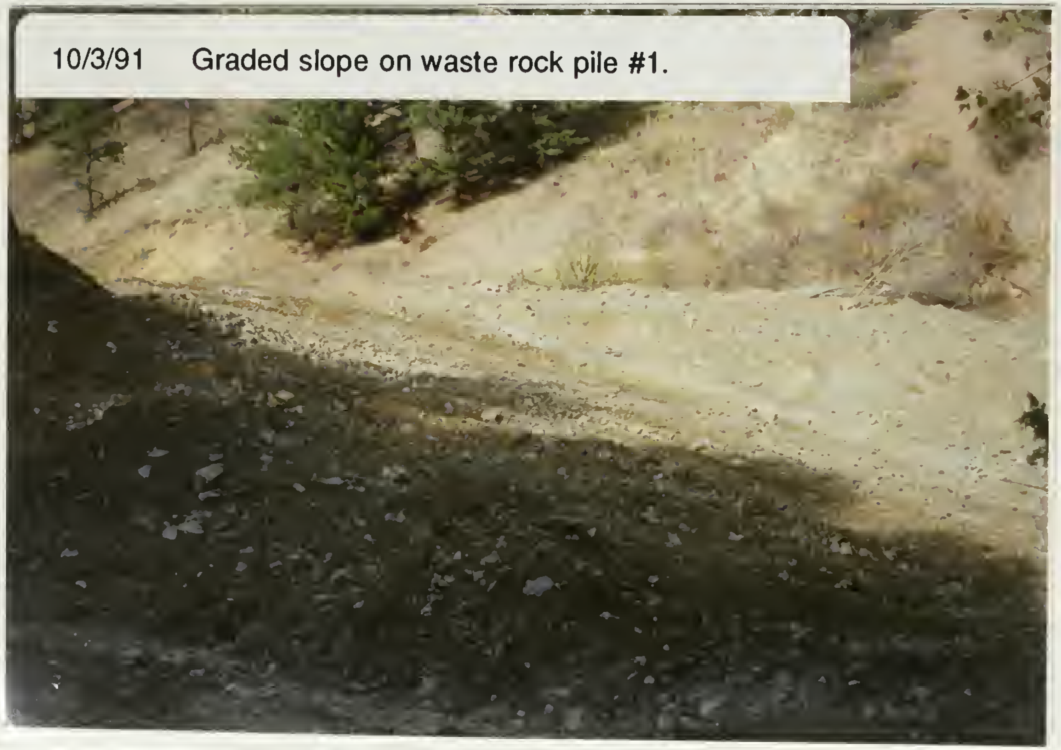


10/3/91 Four by four foot key trench at head of riprap channel in lower tailings pond.



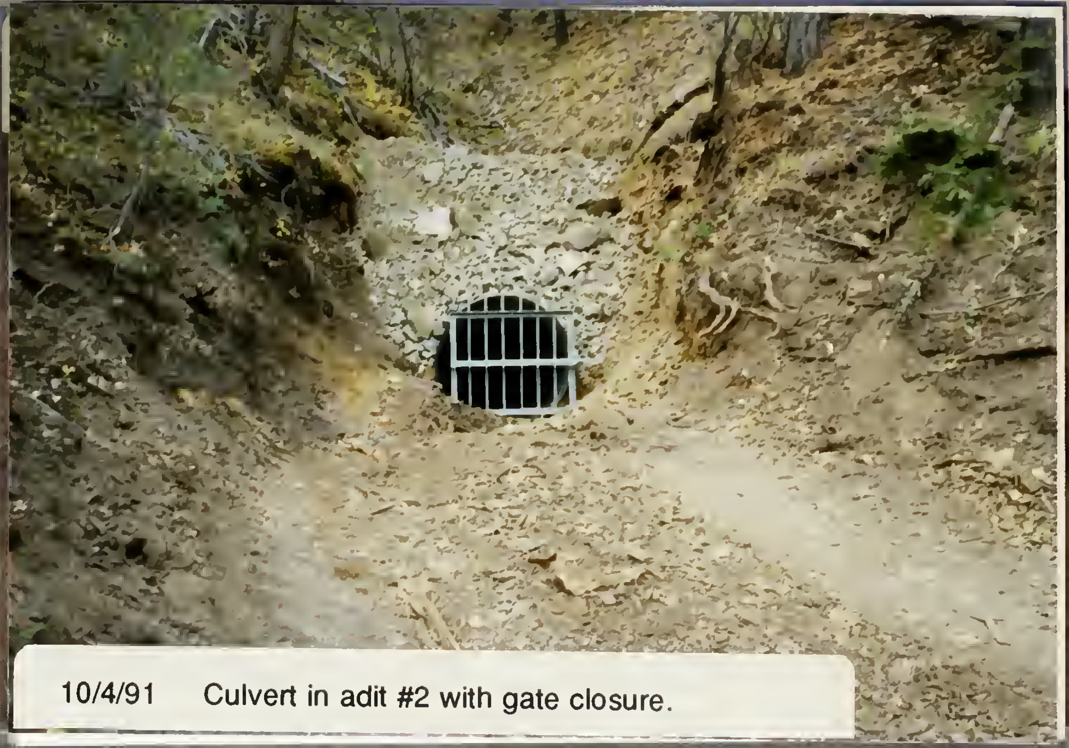

10/3/91 Culvert in adit #2 on four inch bedding material.


10/3/91 Riprap channel in lower tailings pond prior to spreading riprap.

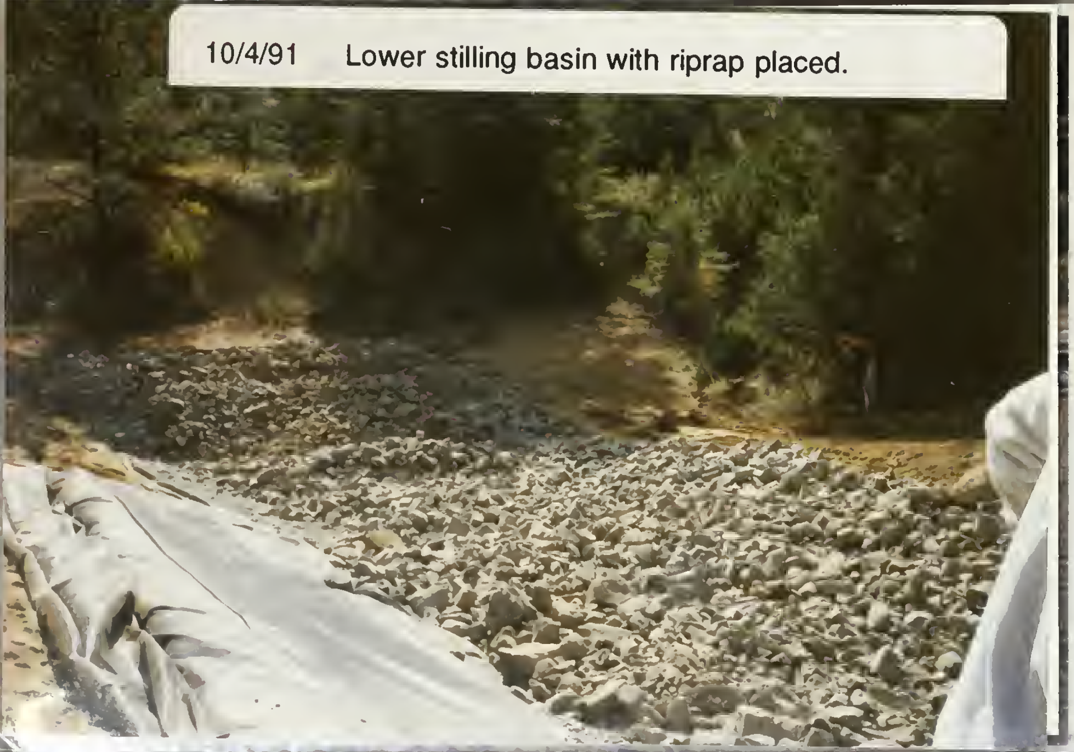

10/3/91 Graded slope on waste rock pile #1.

10/3/91 Lower tailings pond slope looking southwest at lower stilling basin.

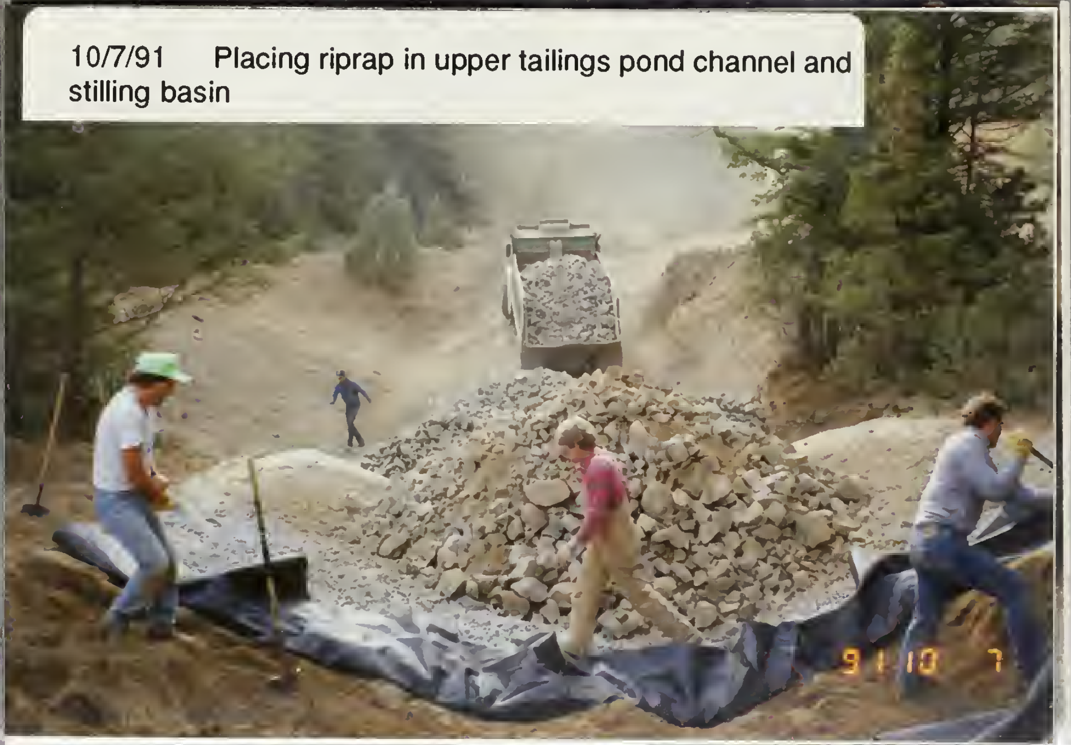
10/4/91 Burning debris on upper tailings pond.



10/4/91 Culvert in adit #2 with gate closure.

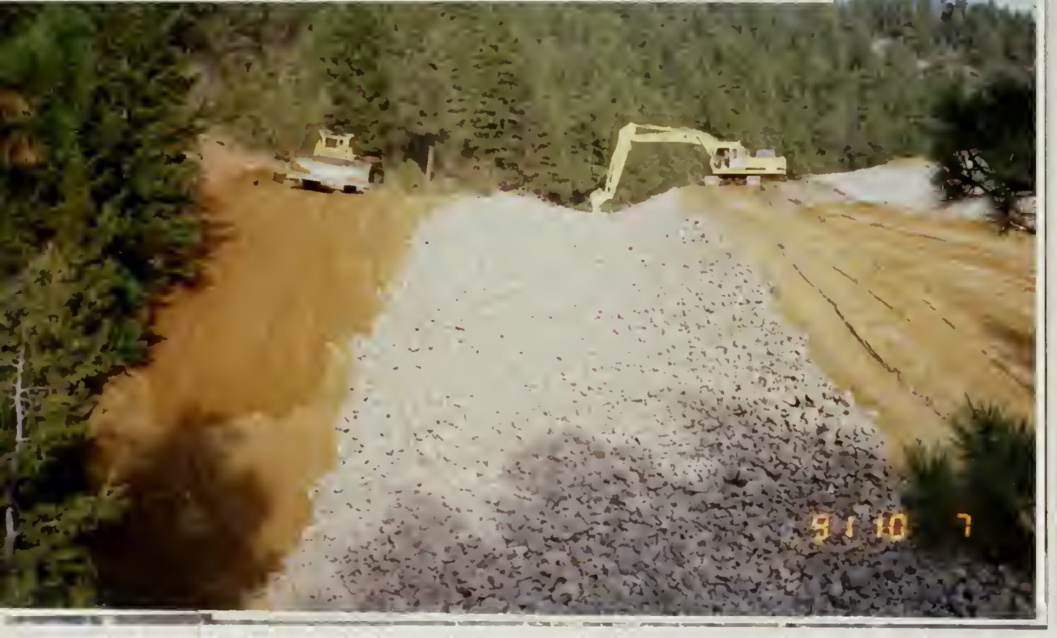


10/4/91 Lower stilling basin with riprap placed.

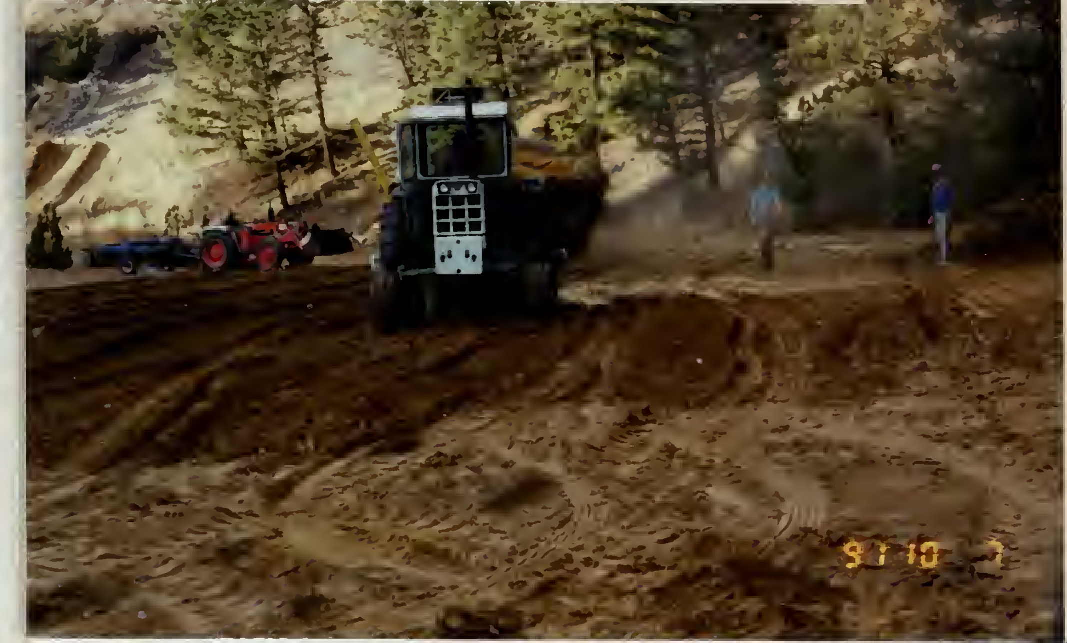


10/7/91 Placing riprap in upper tailings pond channel and stilling basin

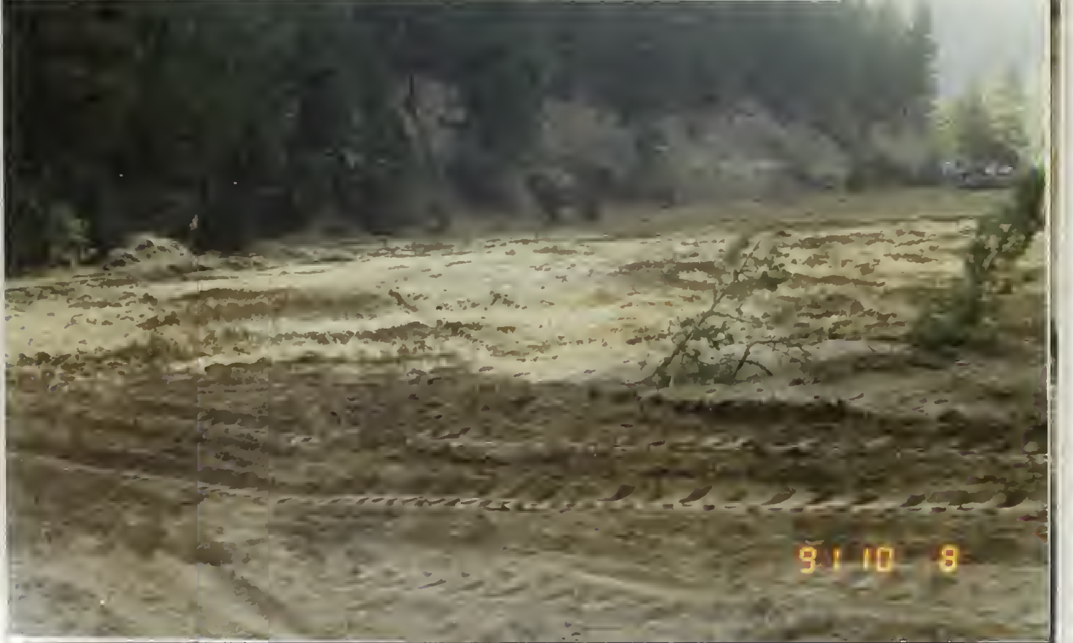
10/7/91 Upper tailings pond riprap channel. Excavator is spreading Type 1 riprap.



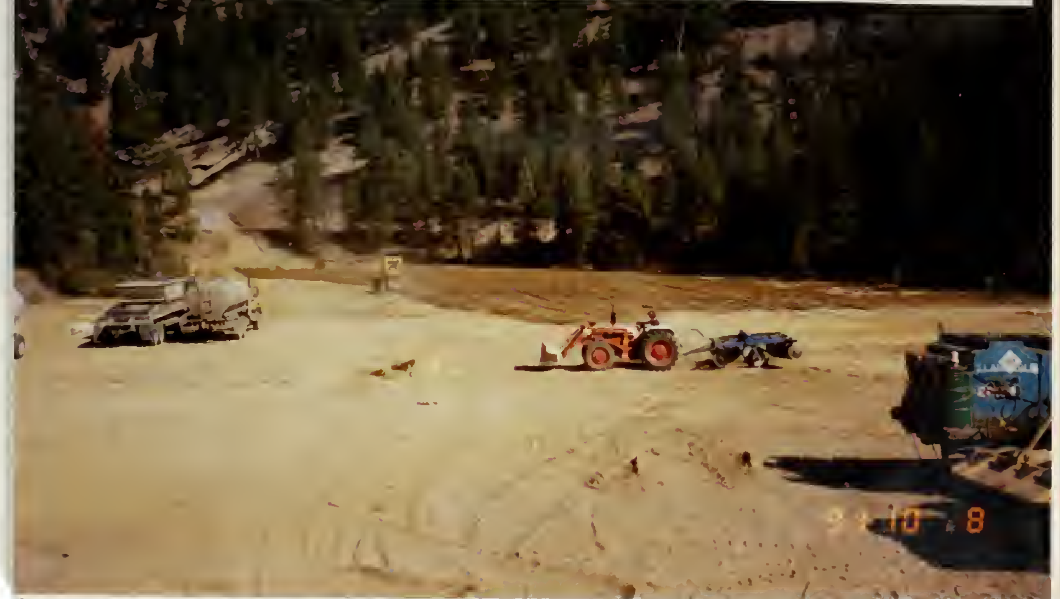
10/7/91 Haybuster spreading hay on upper tailings pond.

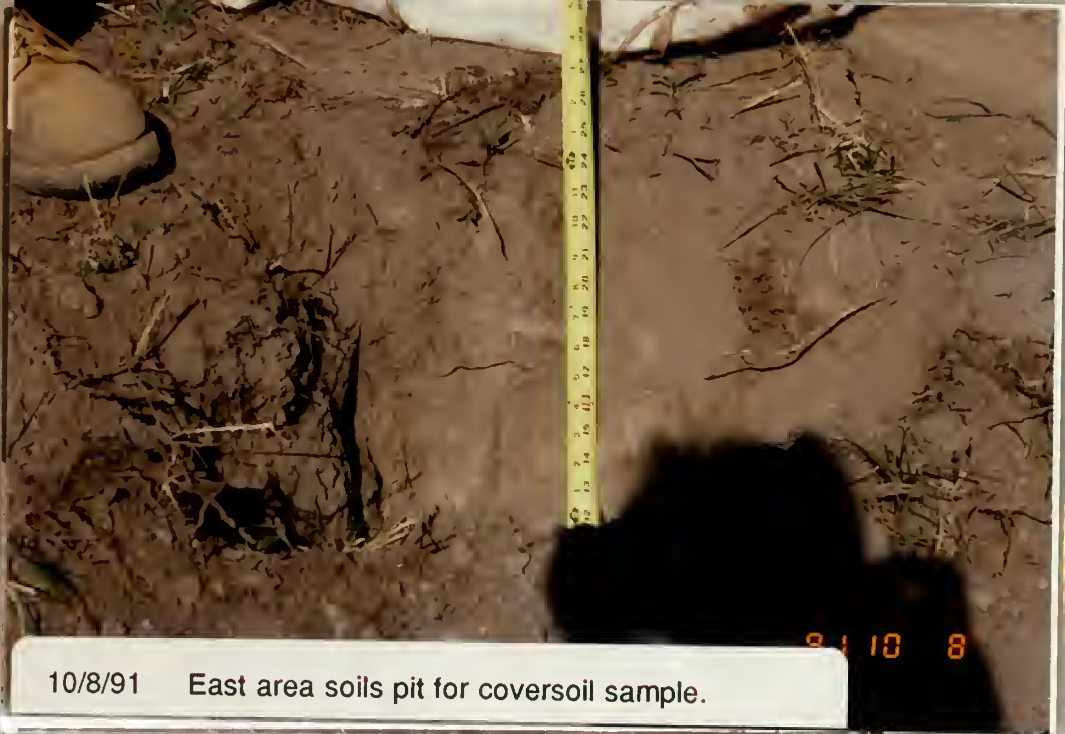


10/8/91 Straw mulch spread on upper tailings pond.

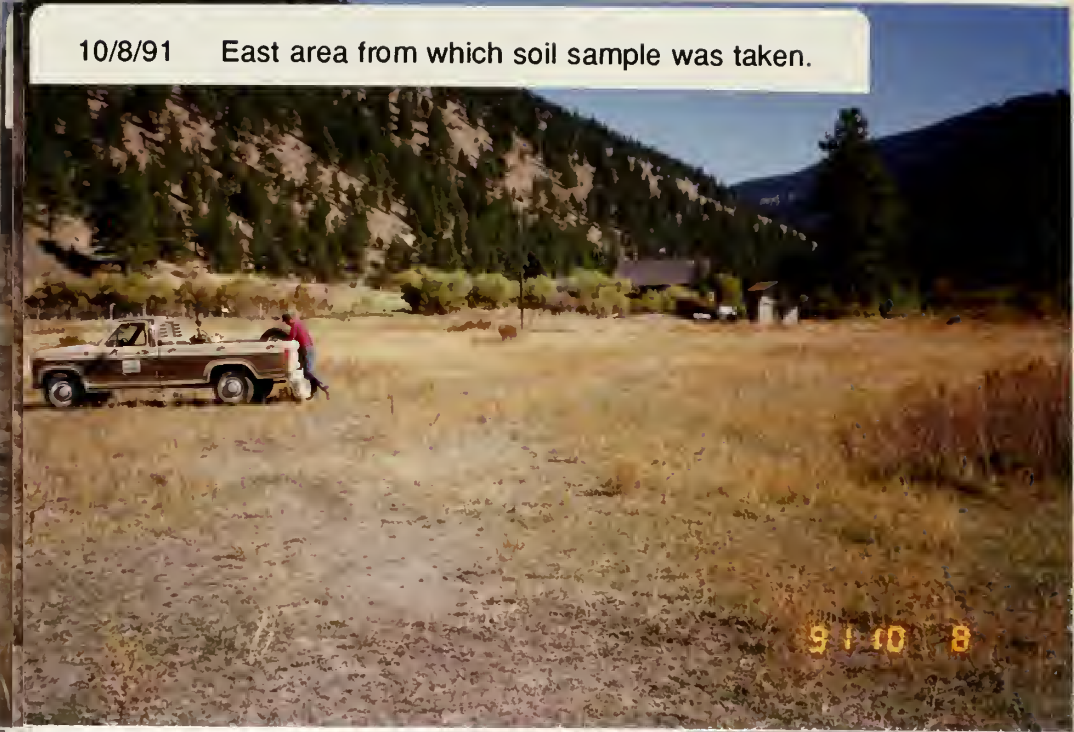


10/8/91 Incorporating straw mulch on upper tailings pond with disc.

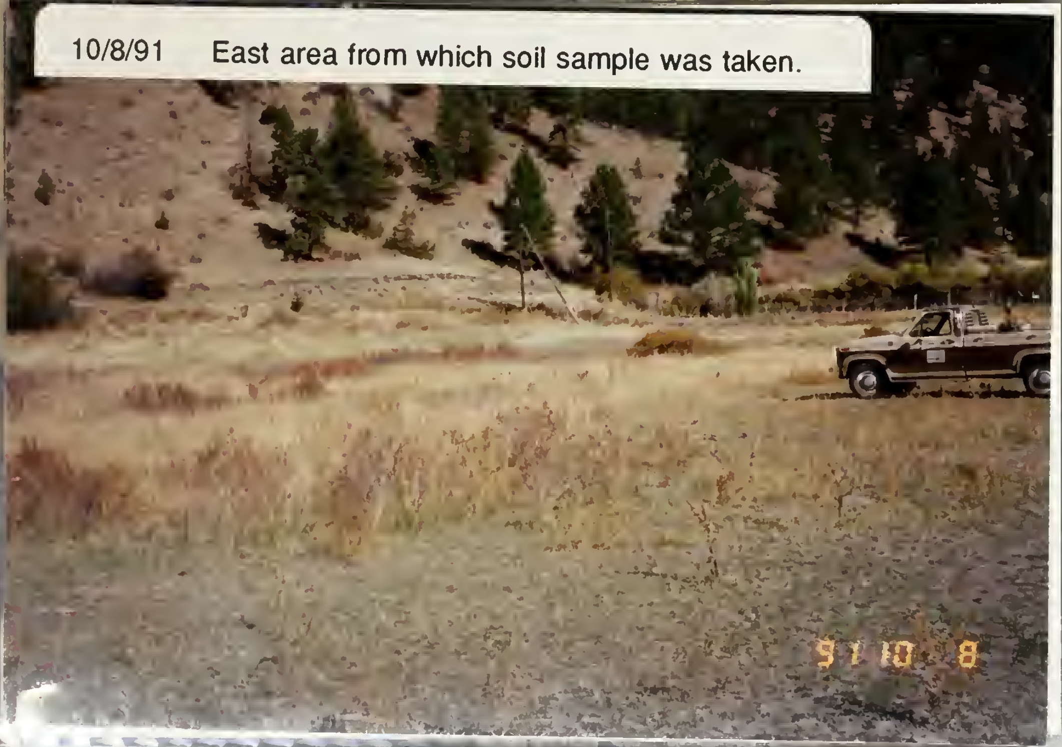




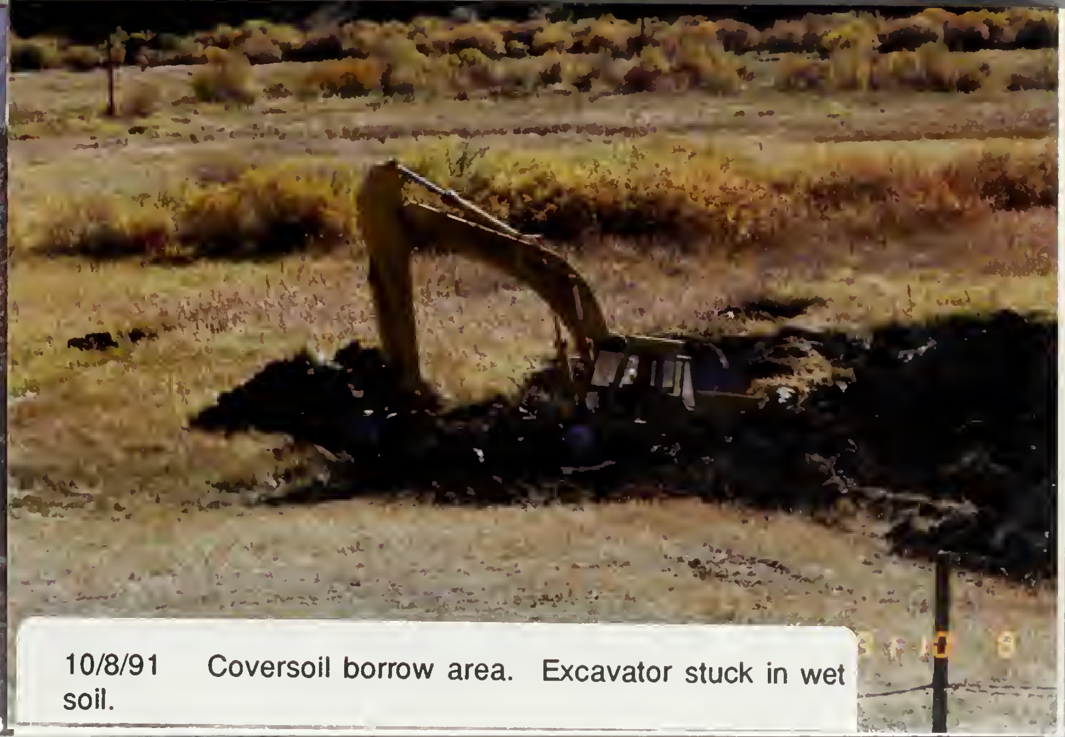
10/8/91 East area soils pit for coversoil sample.



10/8/91 East area from which soil sample was taken.



10/8/91 East area from which soil sample was taken.



10/8/91 Coversoil borrow area. Excavator stuck in wet soil.

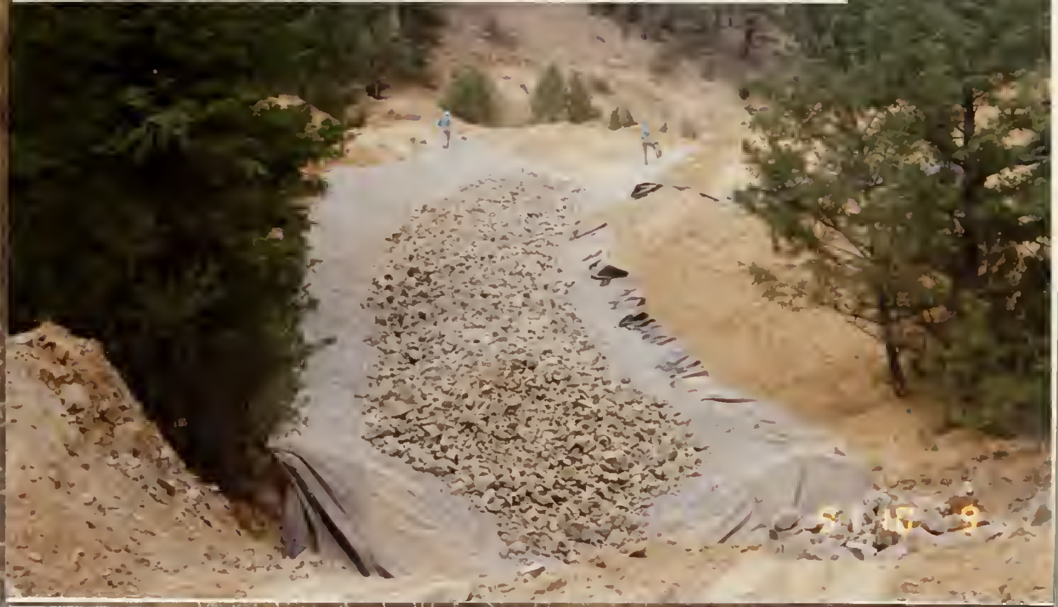
10/8/91 Coversoil borrow area. Fish pond was excavated for the landowner.

10/8/91 Coversoil borrow area.

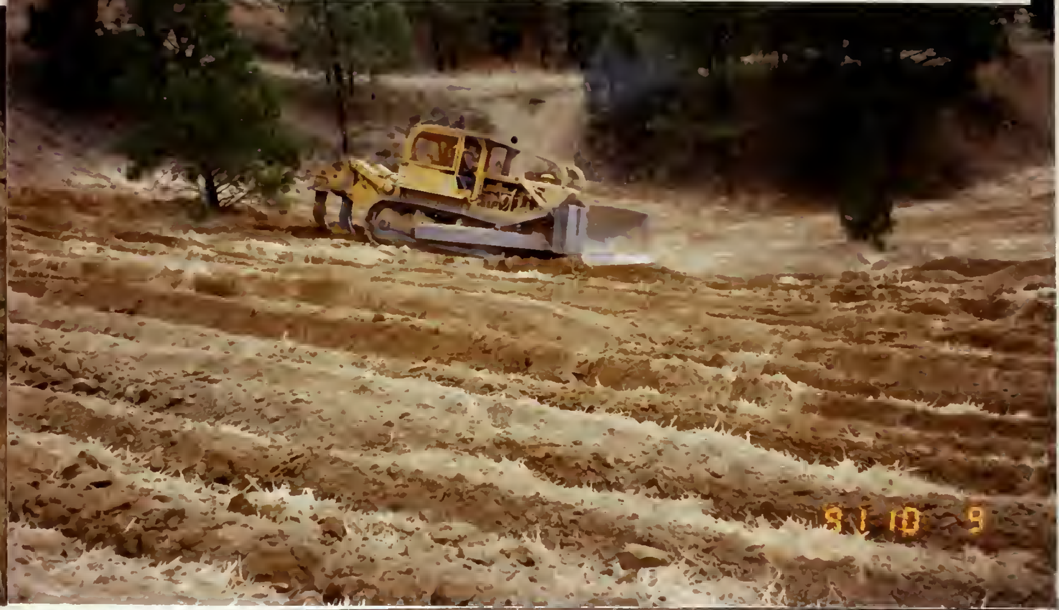
10/9/91 Placing Type 5 riprap on bank stabilization fabric in upper tailings pond channel.

10/9/91 Coversoil dumped on upper tailings pond to dry out before spreading.

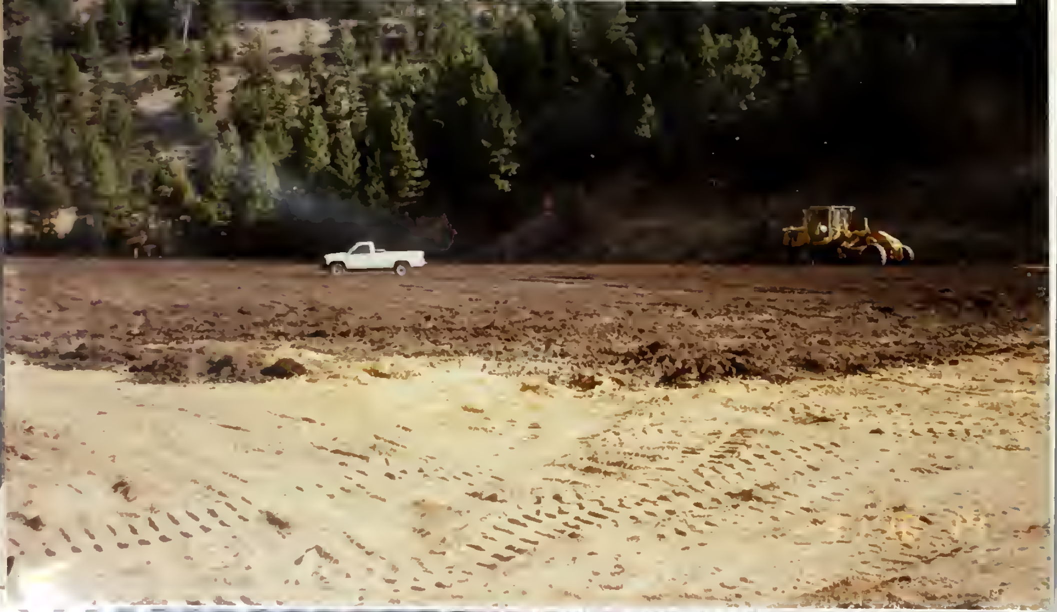
10/9/91 Riprap channel in upper tailings pond prior to spreading Type 1 riprap.



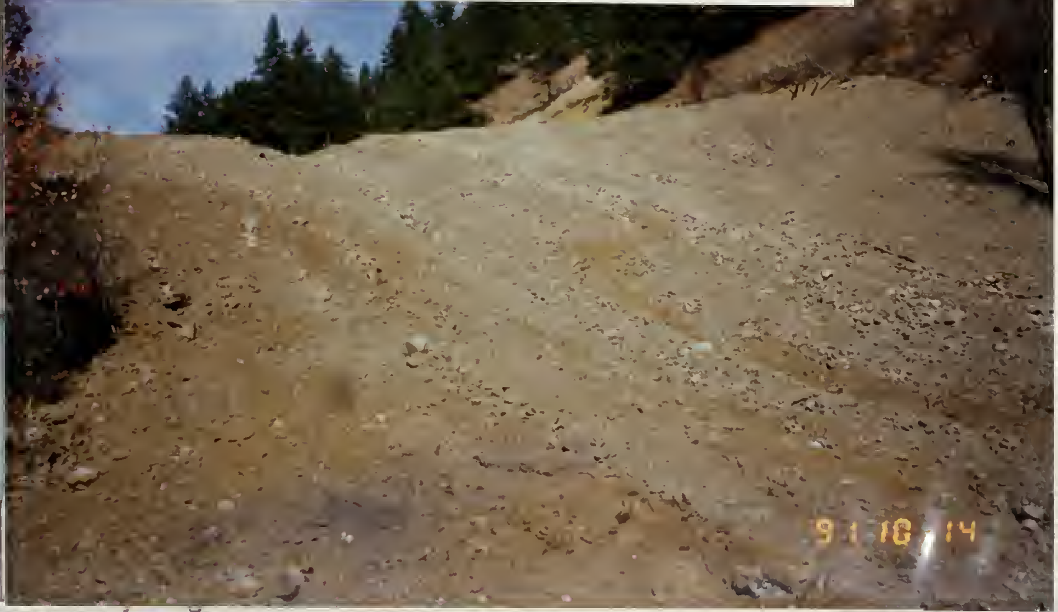
10/9/91 Incorporating straw mulch with rippers into upper tailings pond. Straw mulch was then disced.

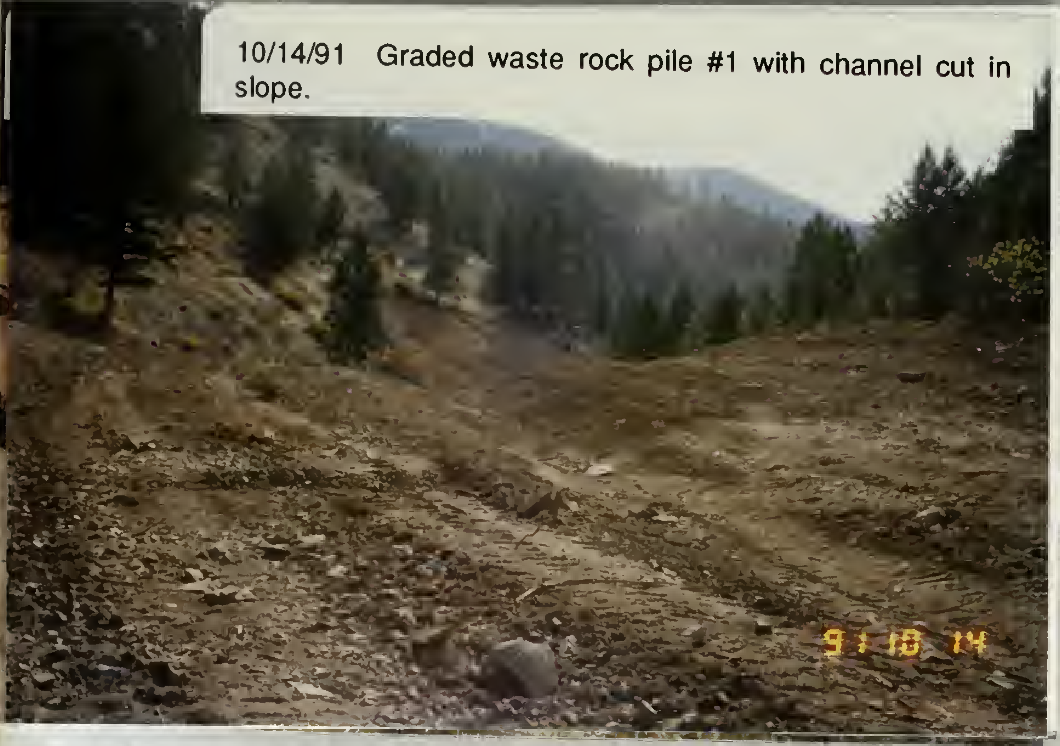


10/14/91 Spreading coversoil on upper tailings pond with grader.

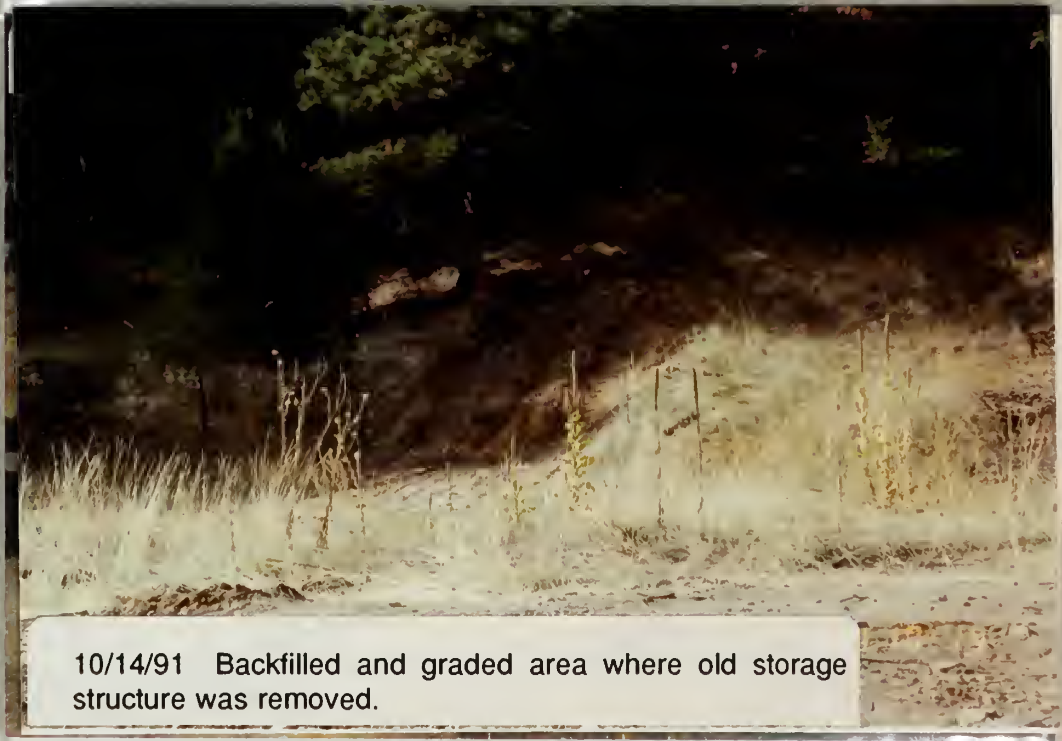


10/14/91 Graded waste rock pile #1 with channel cut in slope.

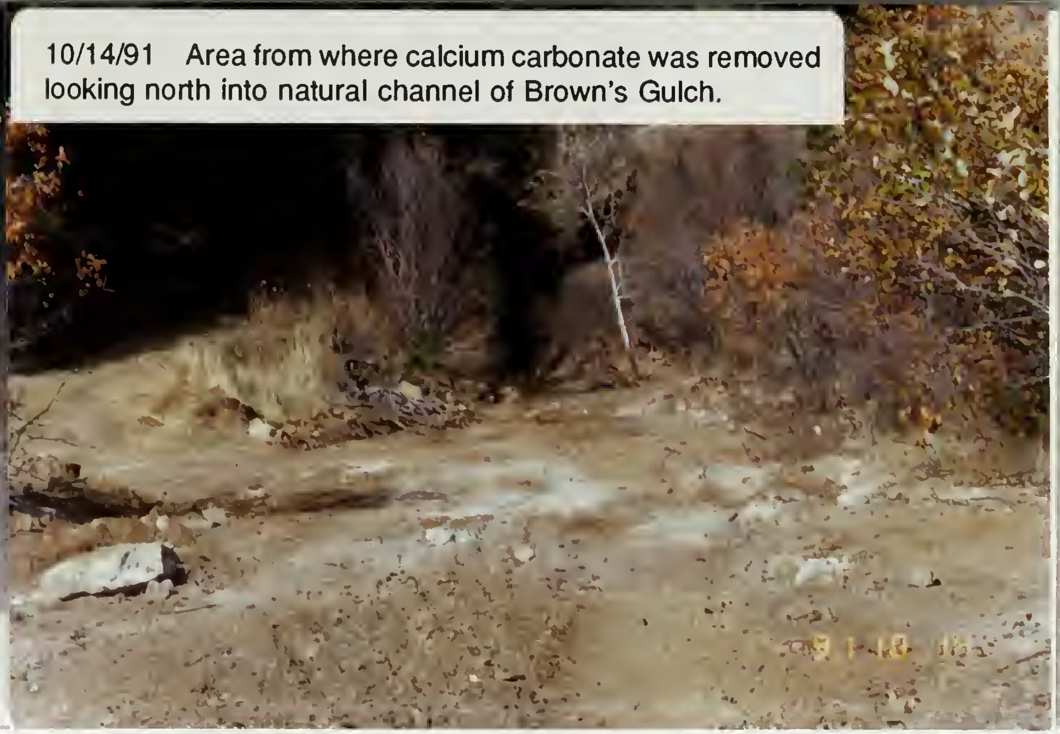




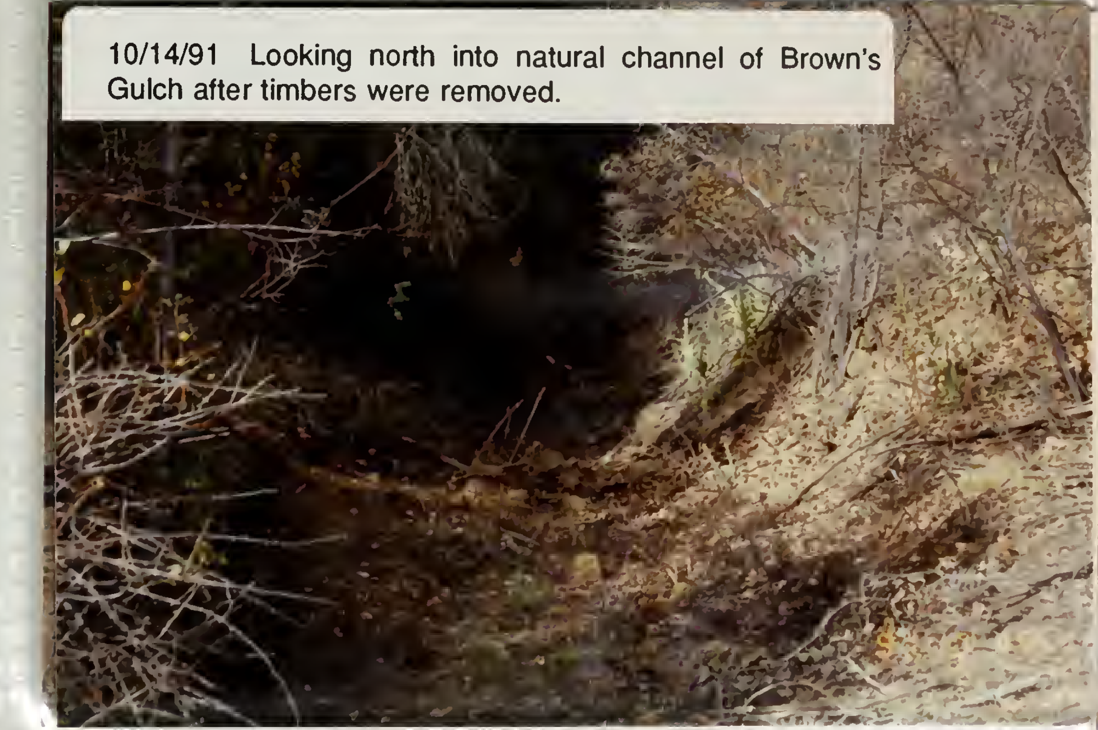
10/14/91 Graded waste rock pile #1 with channel cut in slope.



10/14/91 Backfilled and graded area where old storage structure was removed.

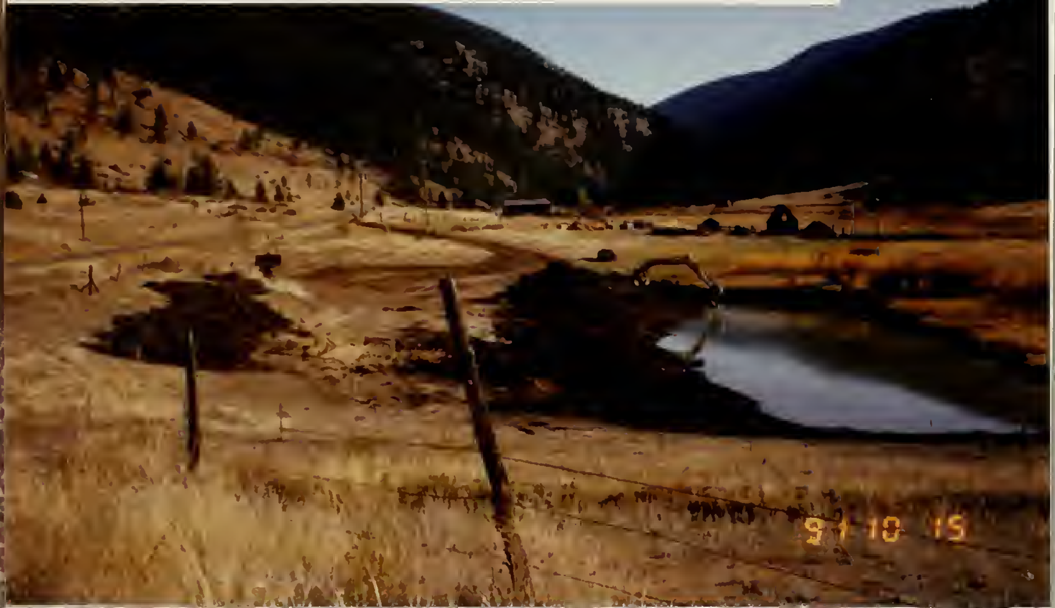


10/14/91 Area from where calcium carbonate was removed looking north into natural channel of Brown's Gulch.

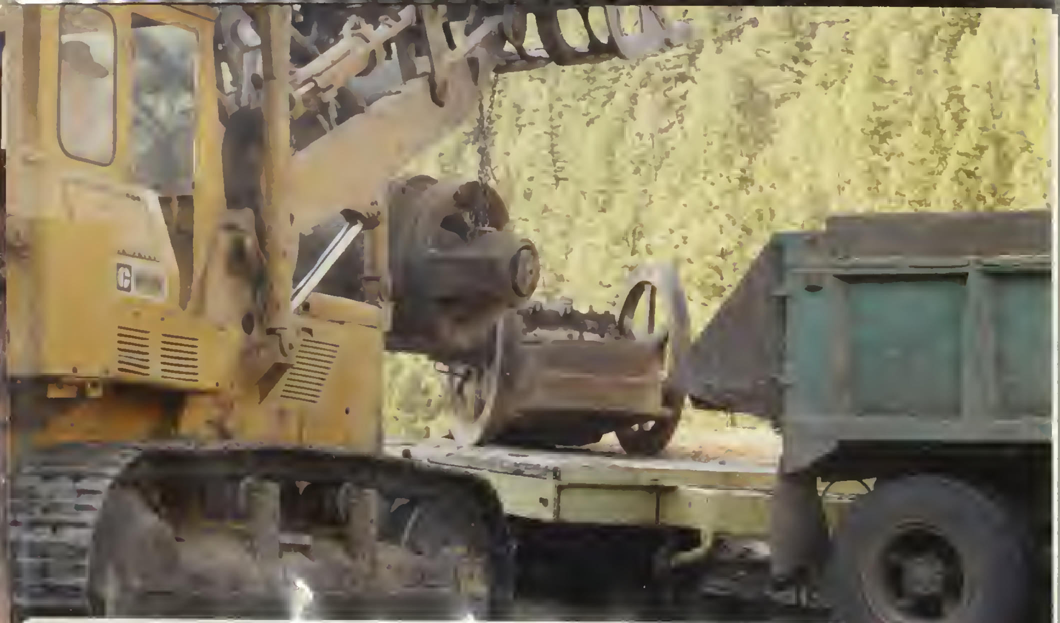


10/14/91 Looking north into natural channel of Brown's Gulch after timbers were removed.

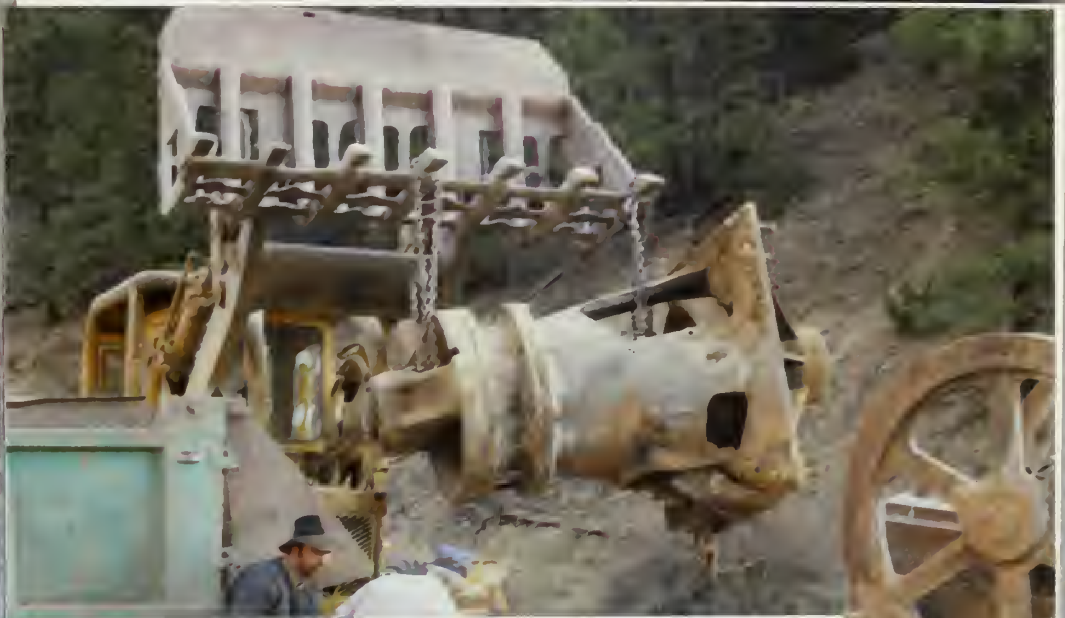
10/15/91 Coversoil borrow area looking northeast up Trout Creek drainage.



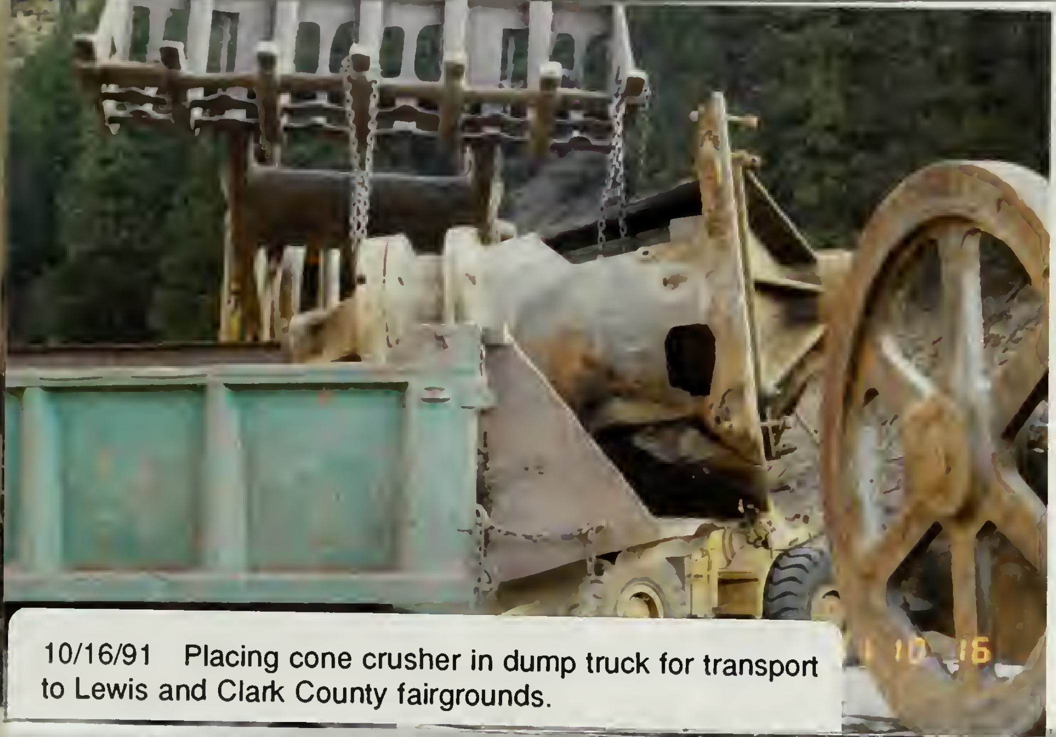
10/15/91 Coversoil borrow area looking northeast up Trout Creek drainage.



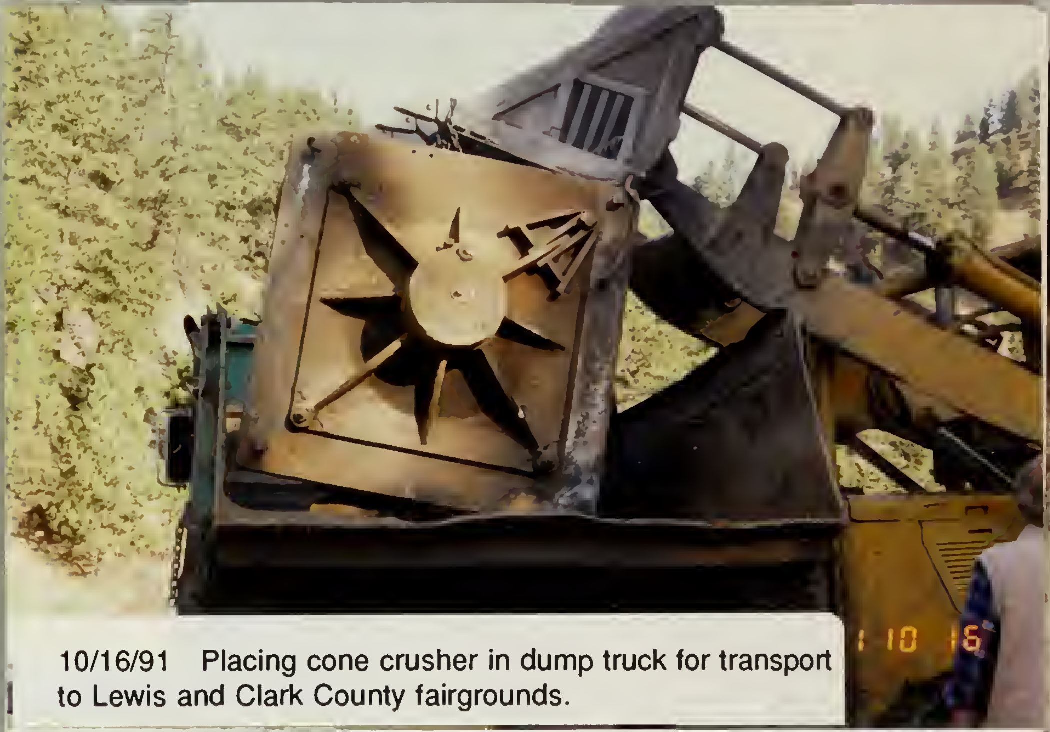
10/16/91 Placing jaw crusher on lowboy trailer for transport to Lewis and Clark County fairgrounds.



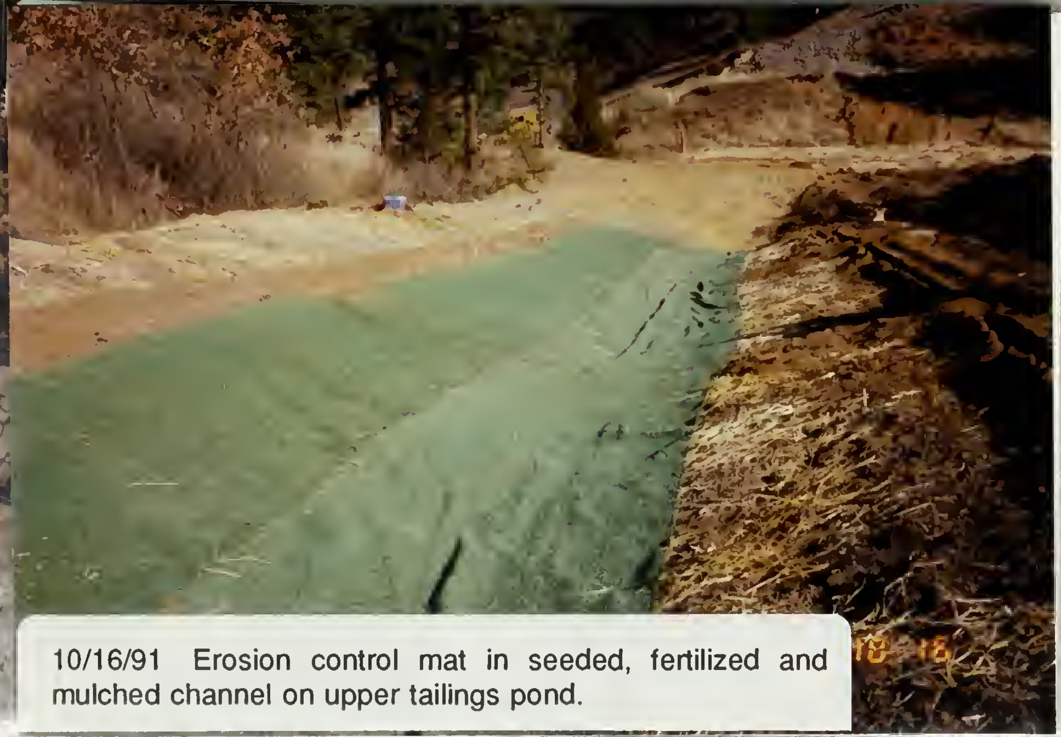
10/16/91 Placing cone crusher on lowboy trailer for transport to Lewis and Clark County fairgrounds.



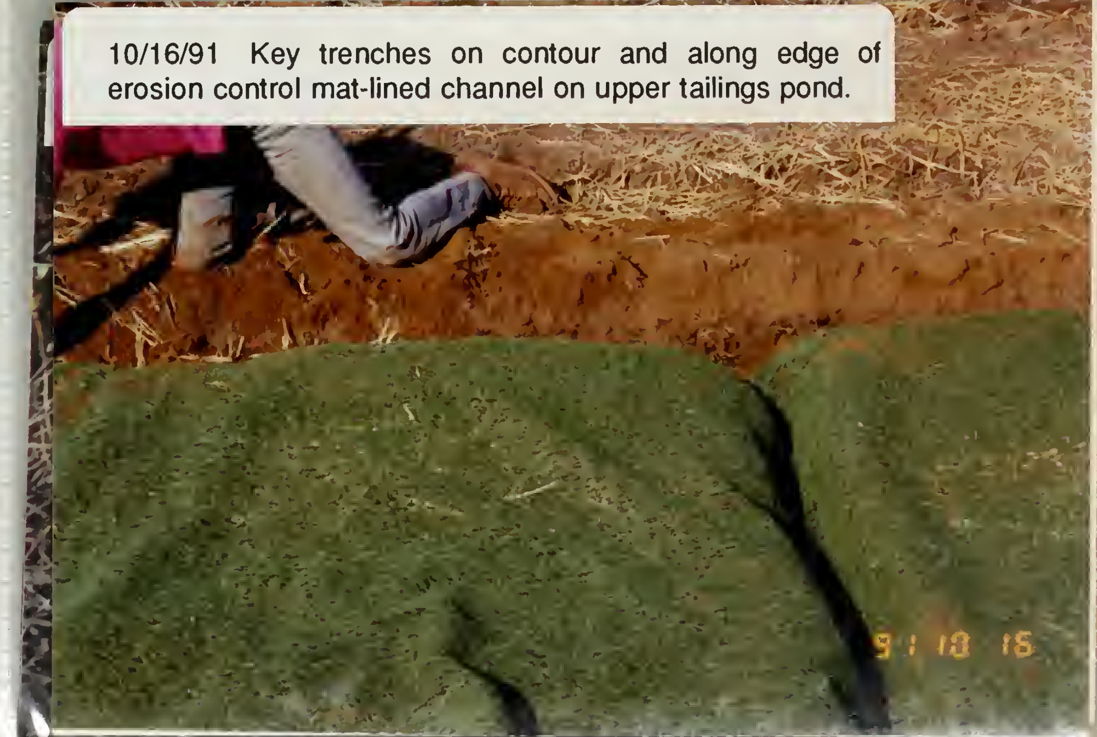
10/16/91 Placing cone crusher in dump truck for transport to Lewis and Clark County fairgrounds.



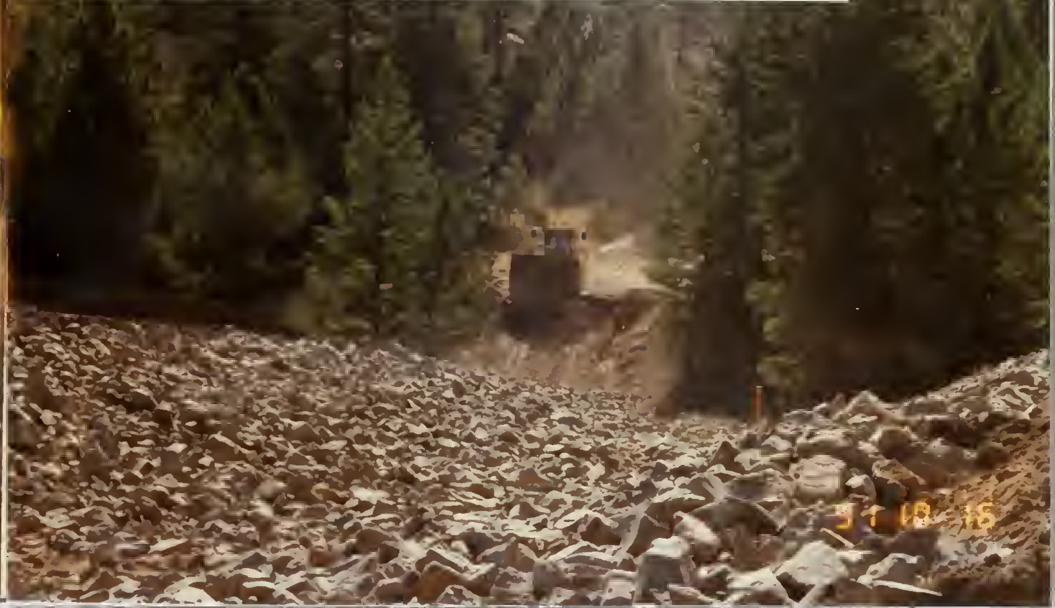
10/16/91 Placing cone crusher in dump truck for transport to Lewis and Clark County fairgrounds.



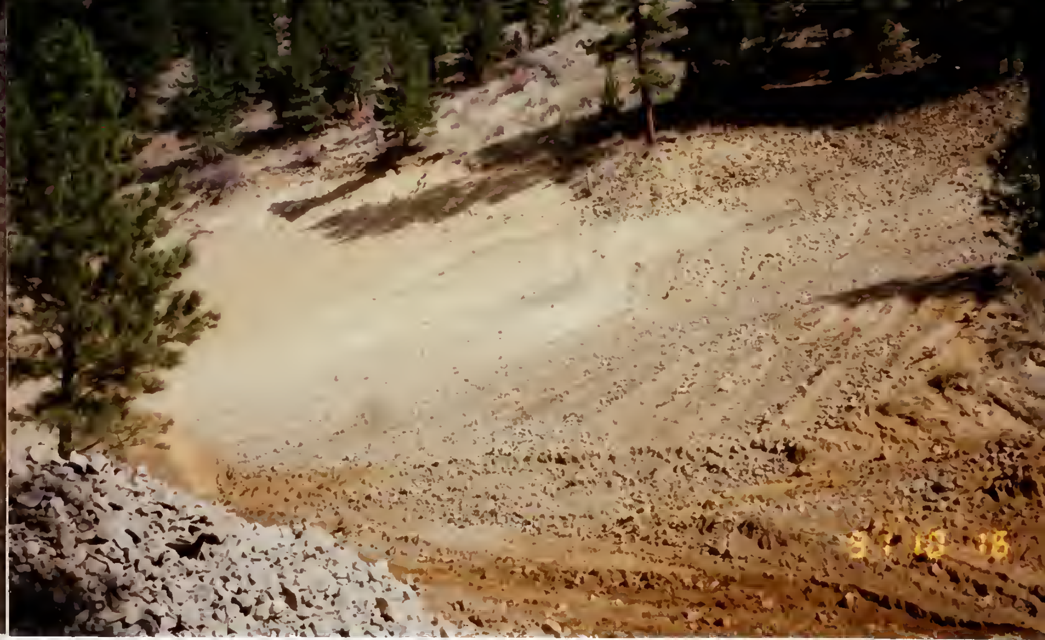
10/16/91 Erosion control mat in seeded, fertilized and mulched channel on upper tailings pond.



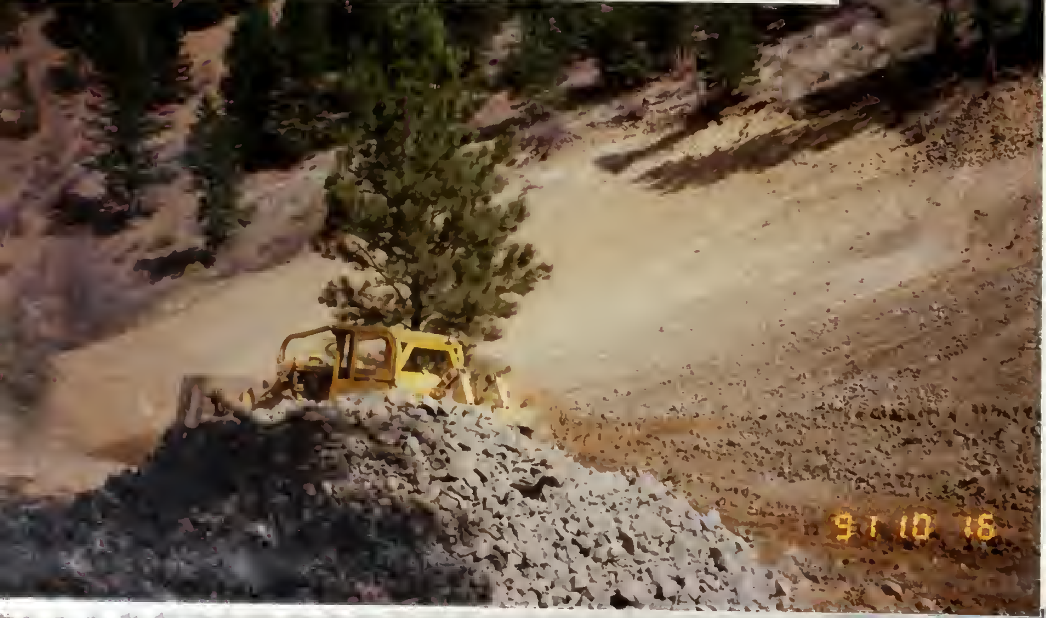
10/16/91 Key trenches on contour and along edge of erosion control mat-lined channel on upper tailings pond.



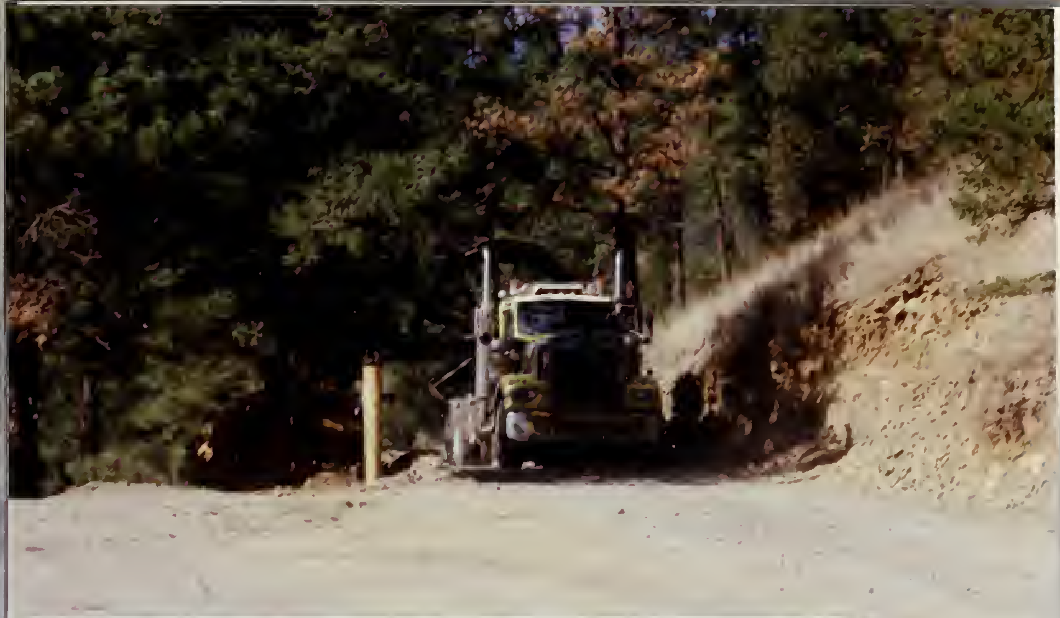
10/16/91 Grading berm for upper stilling basin at base of upper tailings pond riprap channel.



10/16/91 Graded slope at mill building site.



10/16/91 Graded slope at mill building site with stockpiled Type 2 riprap in foreground.



10/16/91 Hauling flotation separator to Lewis and Clark County fairgrounds.

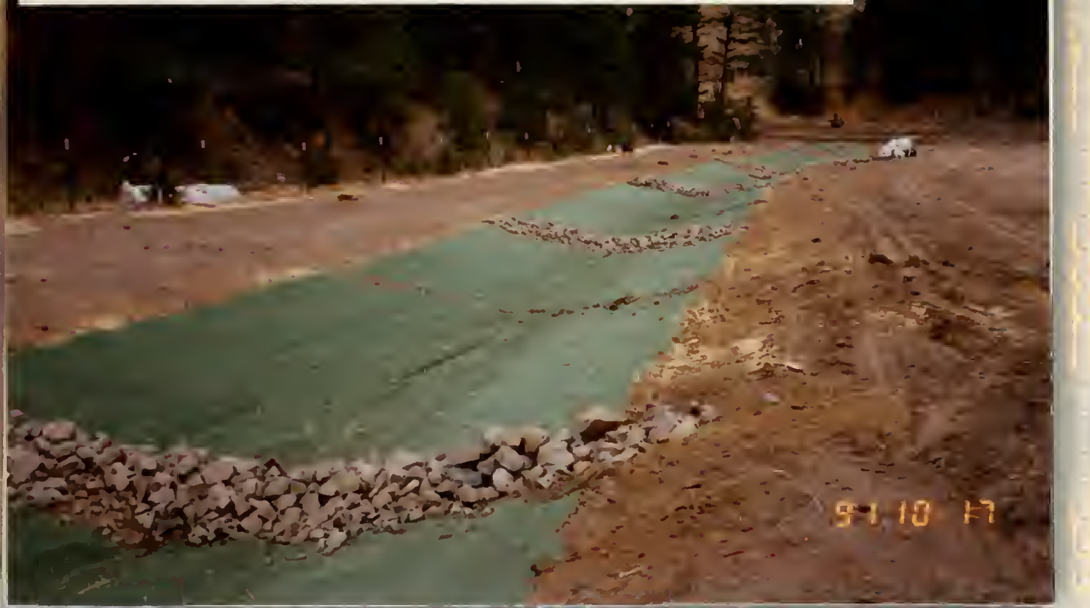
10/16/91 Hauling flotation separator to Lewis and Clark County fairgrounds.

10/16/91 Unloading flotation separator with two front end loaders at fairgrounds.

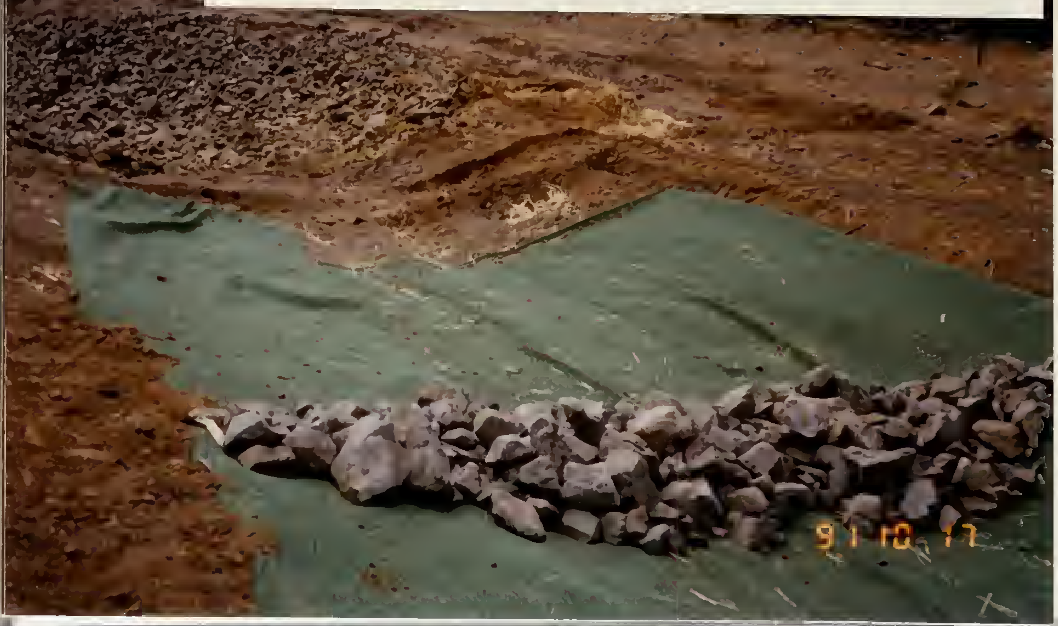
10/16/91 Unloading flotation separator with two front end loaders at fairgrounds.

10/16/91 Unloading flotation separator with two front end loaders at fairgrounds.

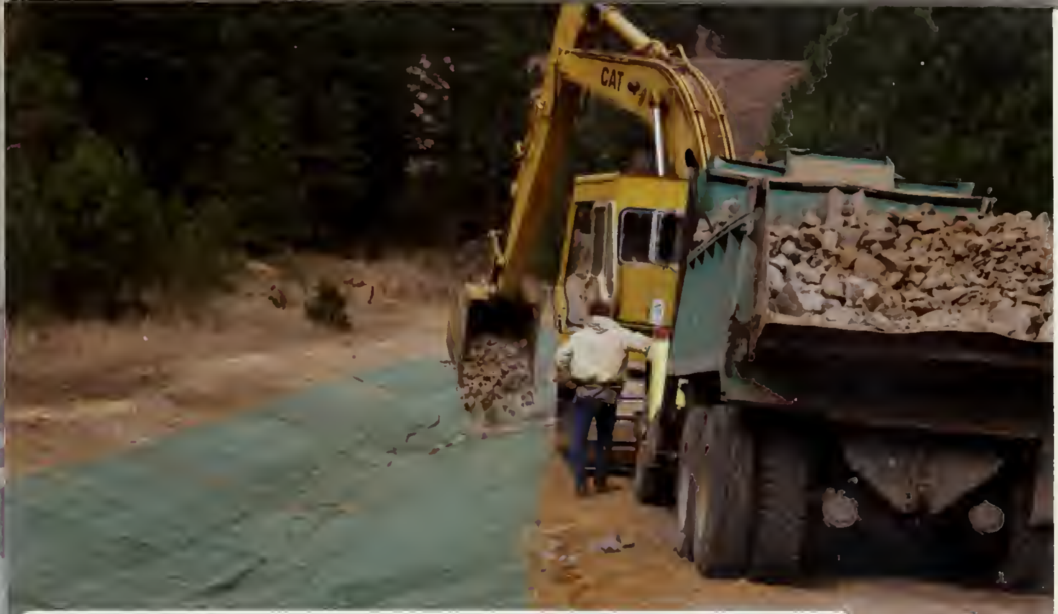
10/17/91 Erosion control mat-lined channel with check dams every 50 feet in upper tailings pond.



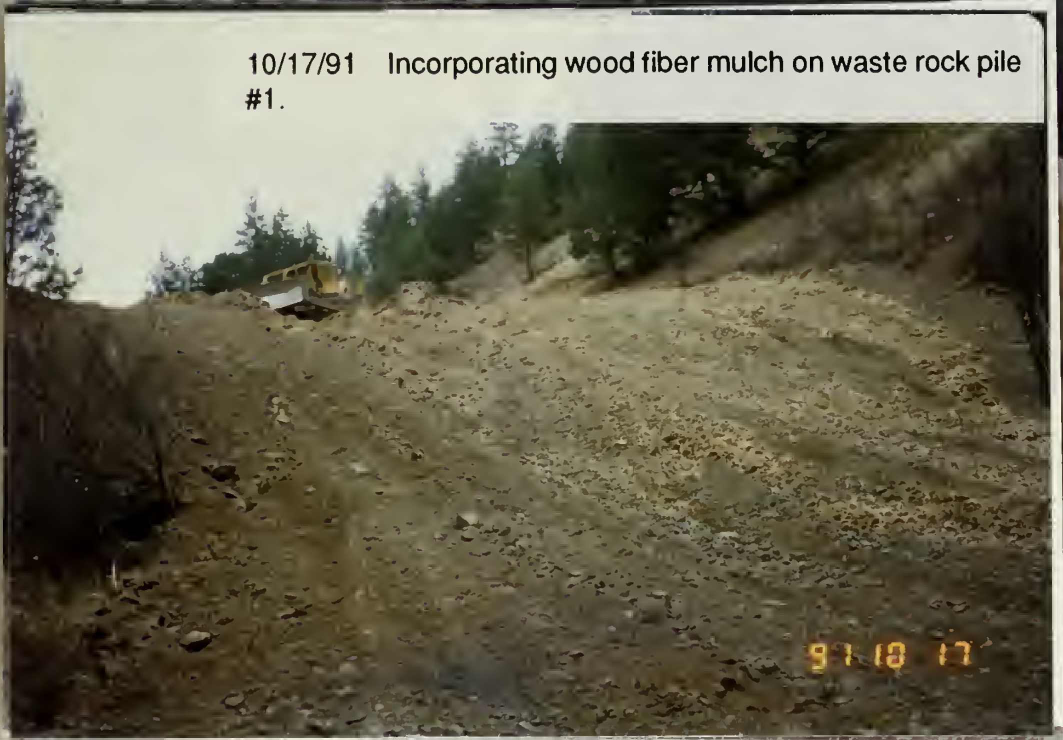
10/17/91 Downstream end of mat-lined channel at transition to riprap channel on upper tailings pond.



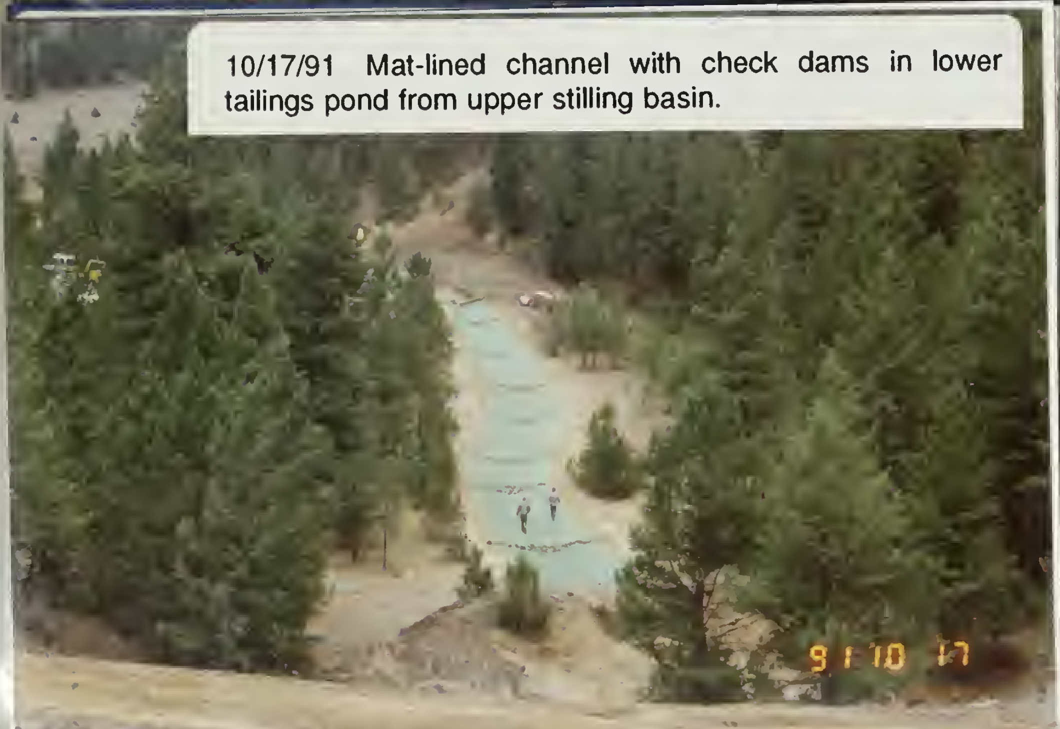
10/17/91 Erosion control mat-lined channel with check dams every 50 feet in upper tailings pond.



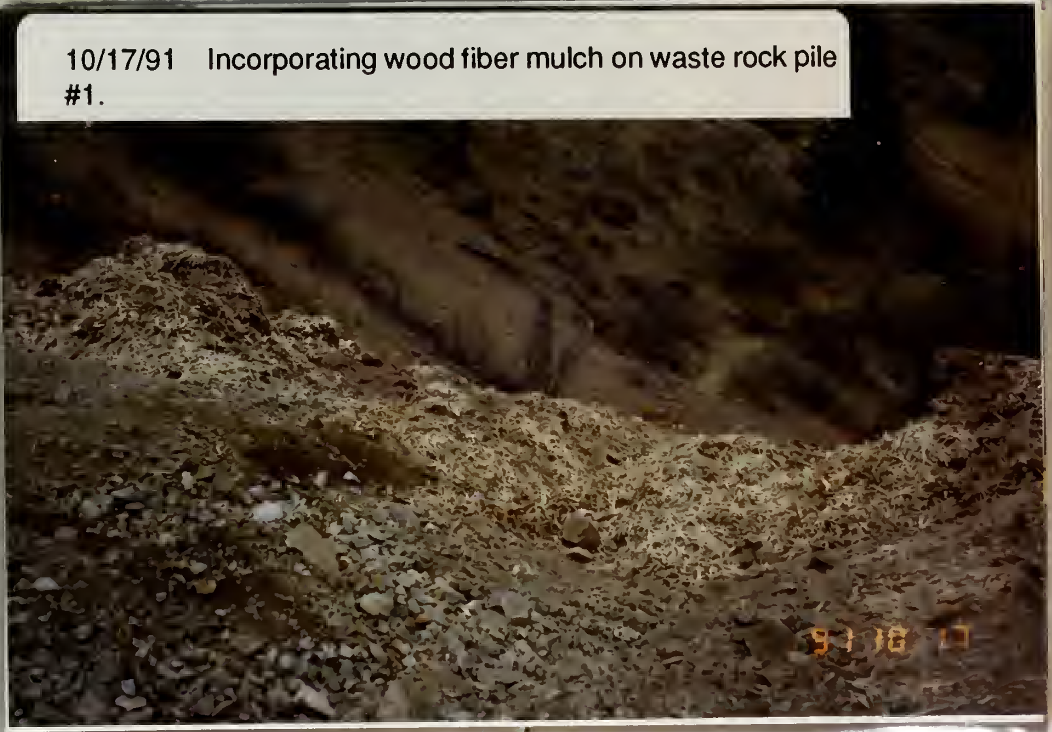
10/17/91 Placing Type 2 riprap for check dams in mat-lined channel in lower tailings pond.



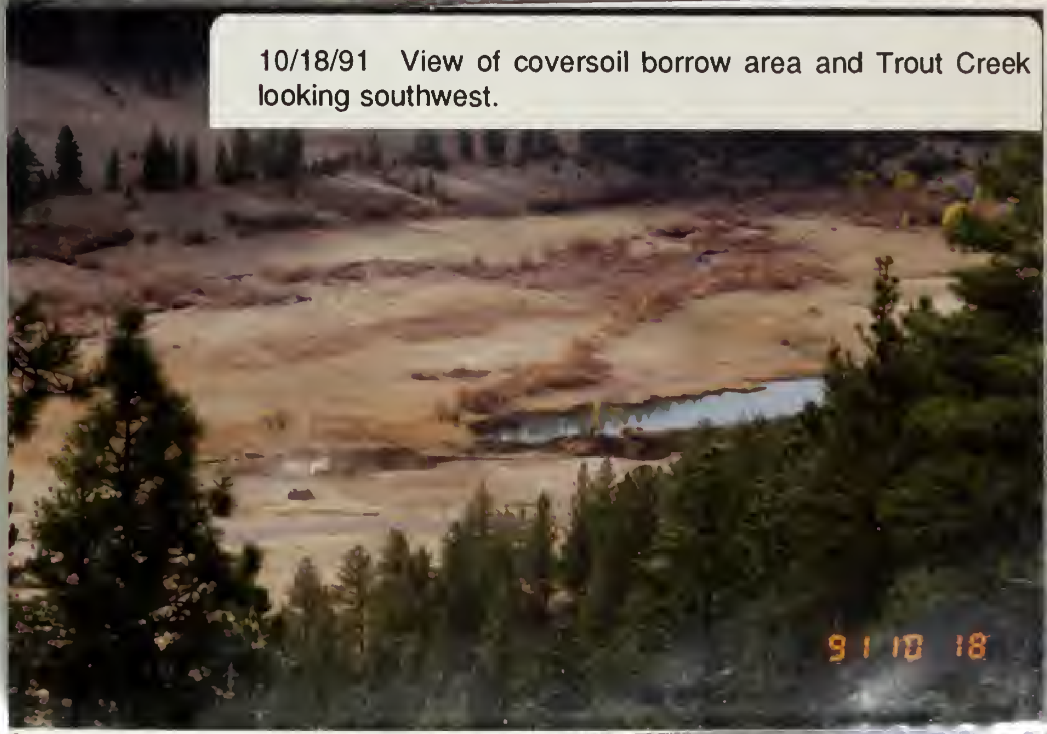
10/17/91 Incorporating wood fiber mulch on waste rock pile #1.



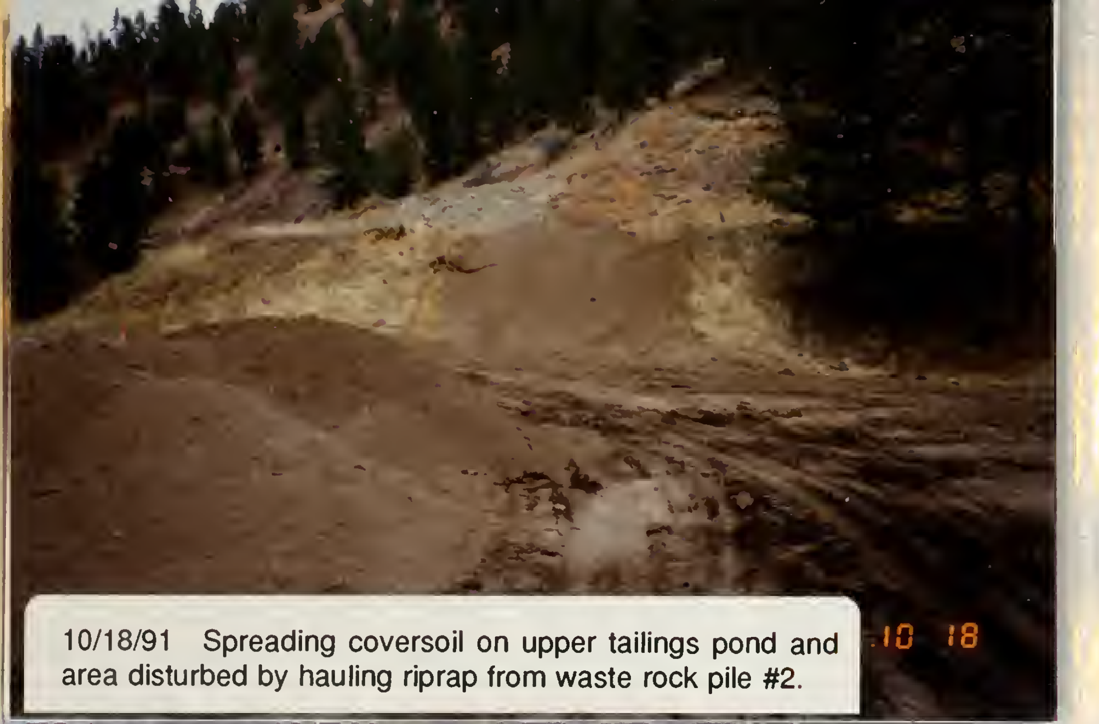
10/17/91 Mat-lined channel with check dams in lower tailings pond from upper stilling basin.



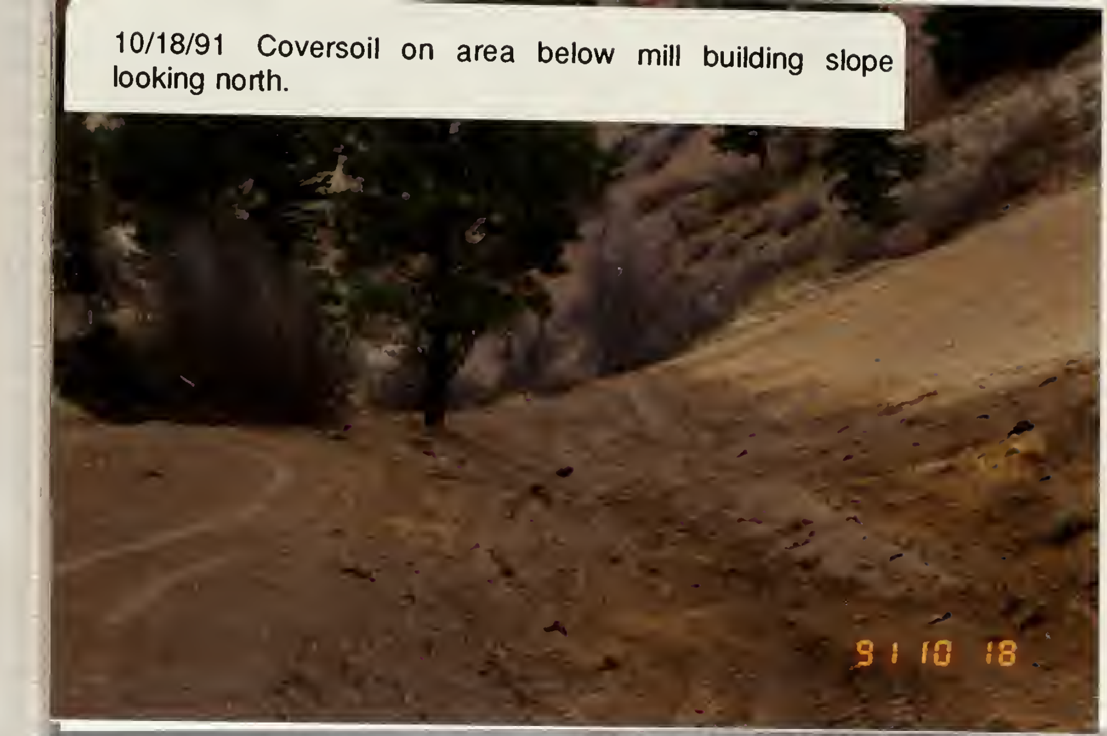
10/17/91 Incorporating wood fiber mulch on waste rock pile #1.



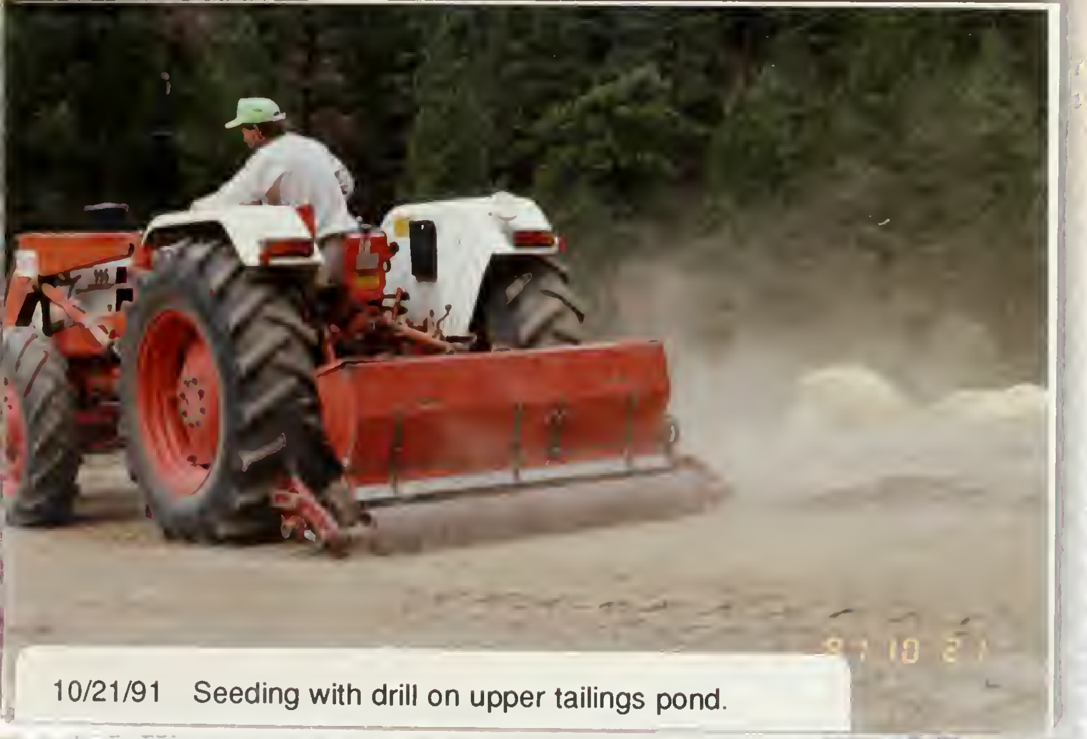
10/18/91 View of coversoil borrow area and Trout Creek looking southwest.



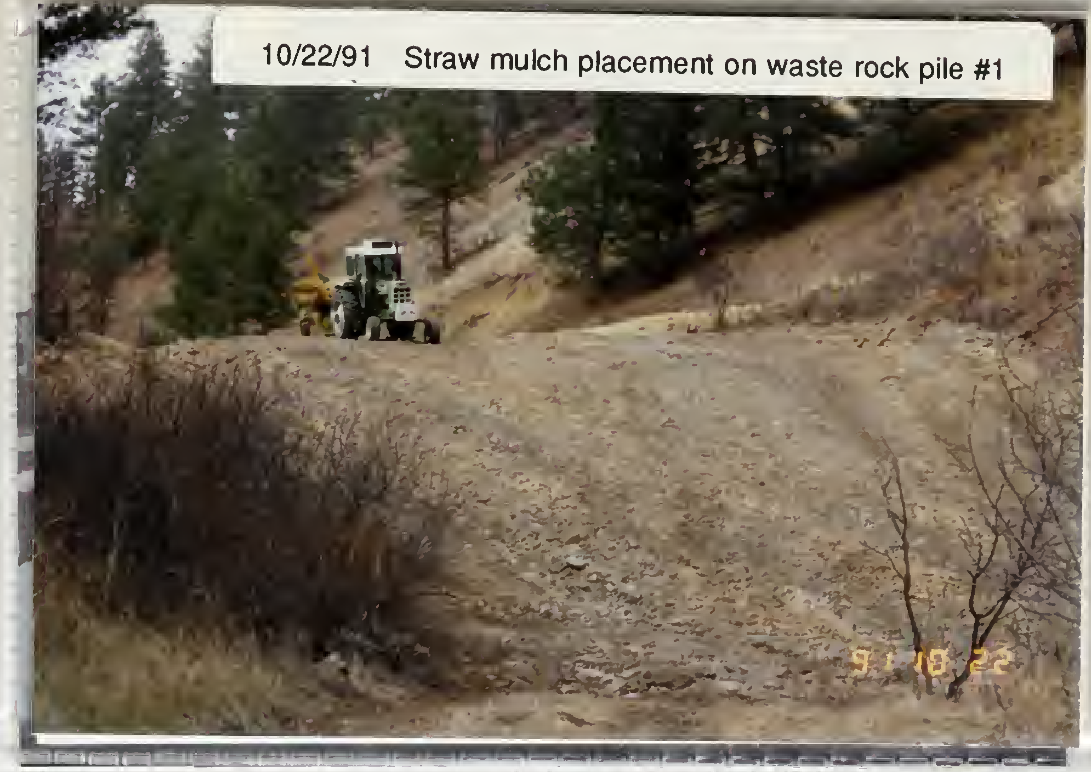
10/18/91 Spreading coversoil on upper tailings pond and area disturbed by hauling riprap from waste rock pile #2.



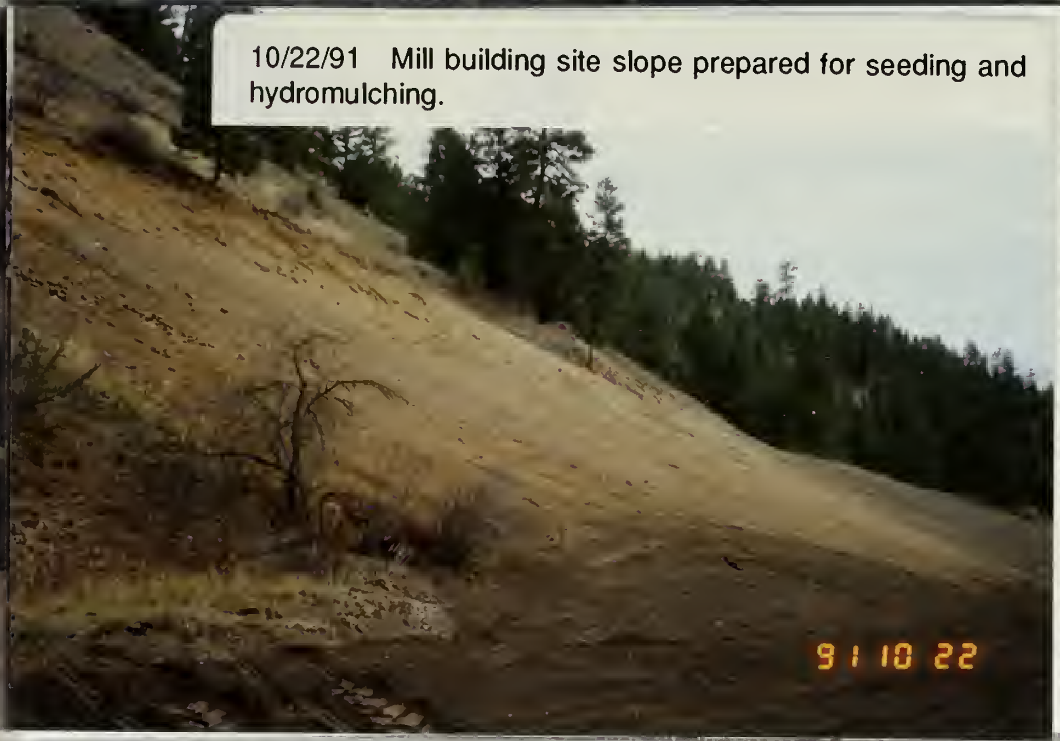
10/18/91 Coversoil on area below mill building slope looking north.

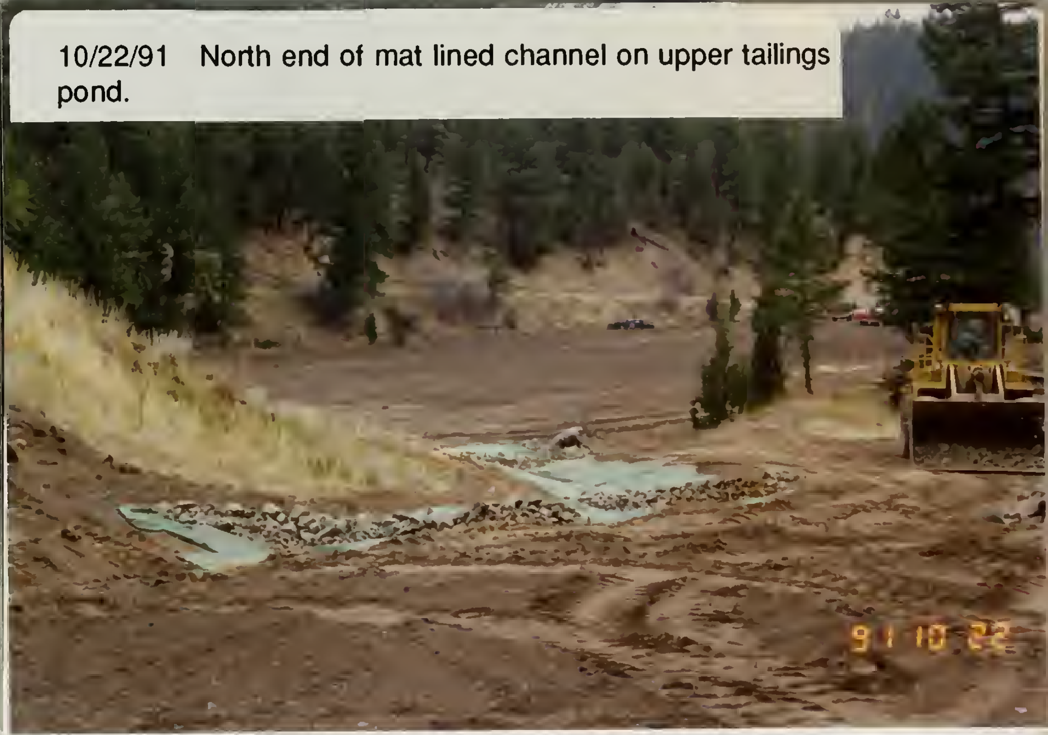


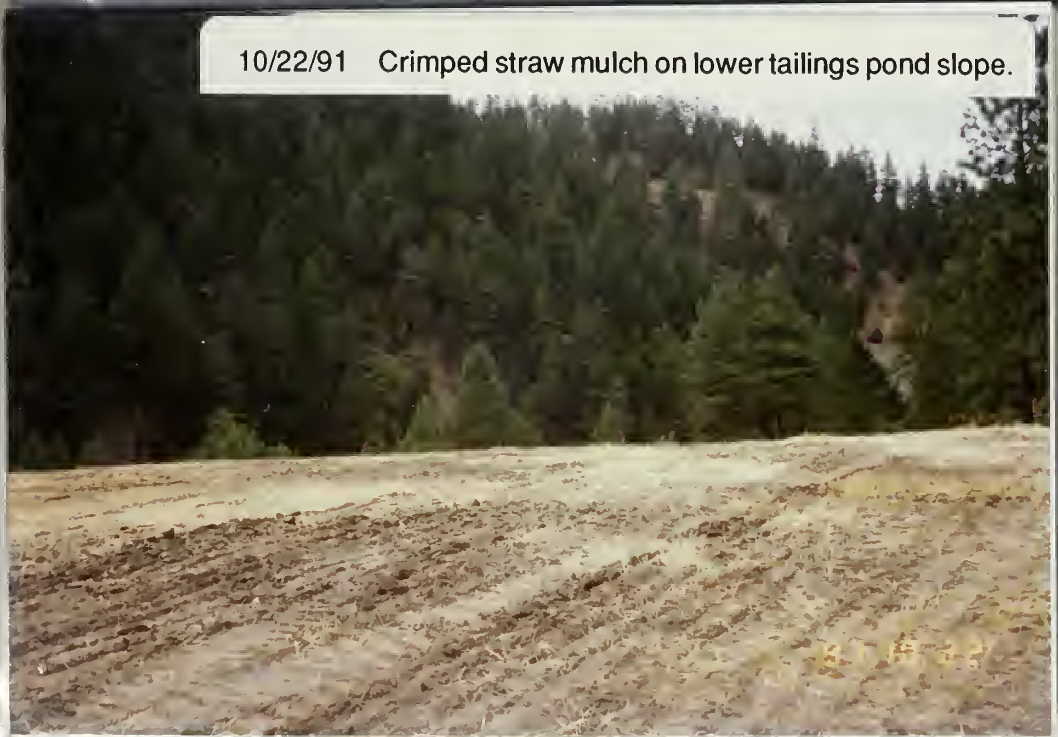
10/21/91 Seeding with drill on upper tailings pond.

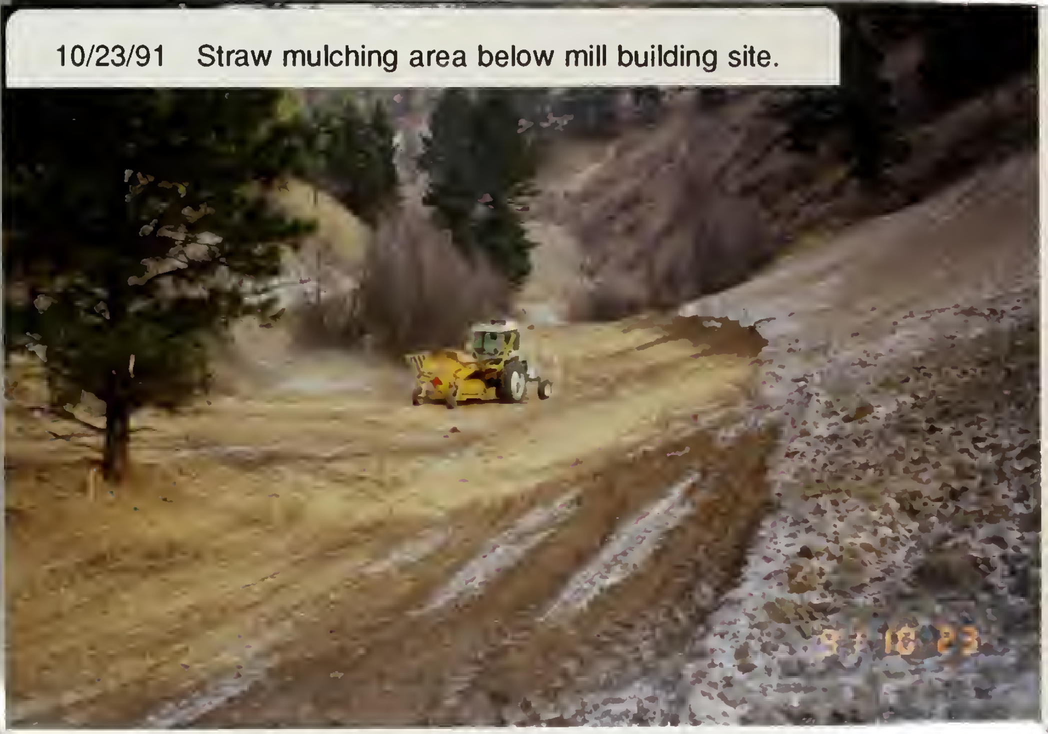


10/22/91 Straw mulch placement on waste rock pile #1

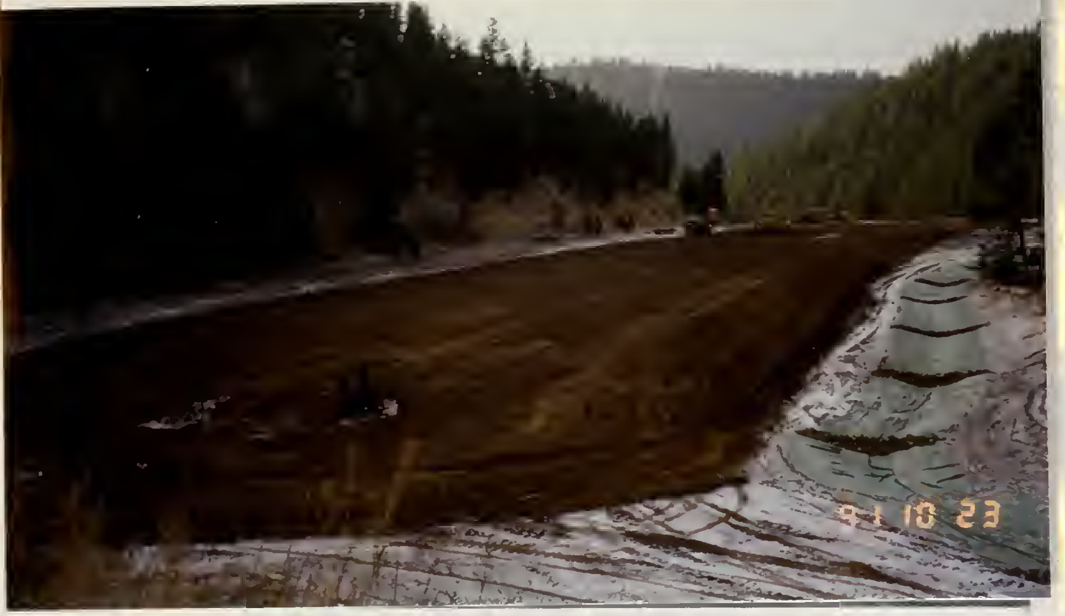

10/22/91 Mill building site slope prepared for seeding and hydromulching.


10/22/91 North end of mat lined channel on upper tailings pond.

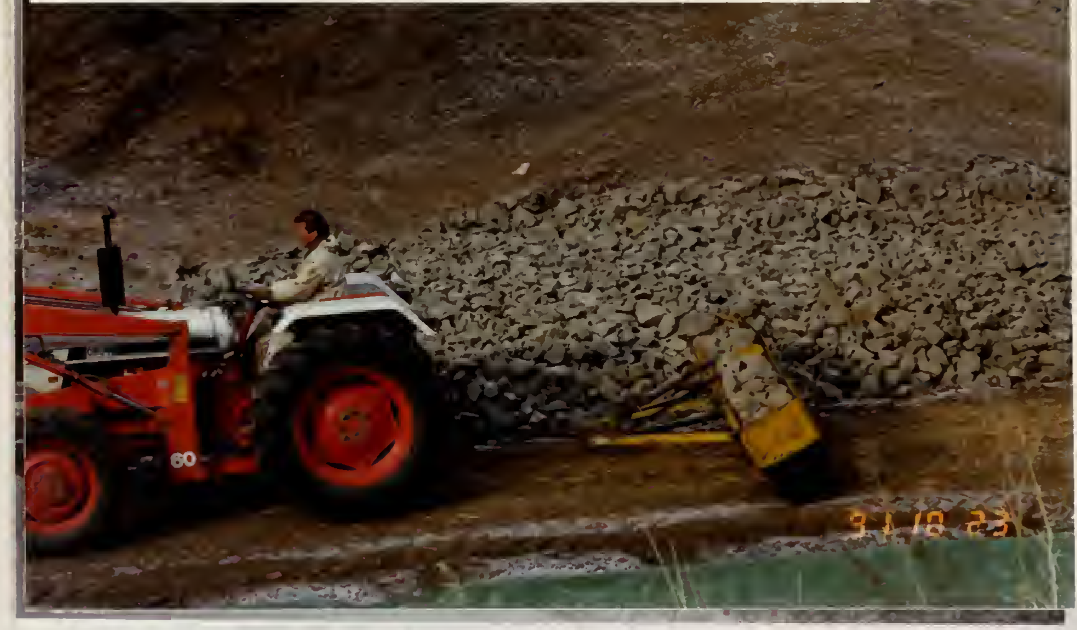

10/22/91 Crimped straw mulch on lower tailings pond slope.

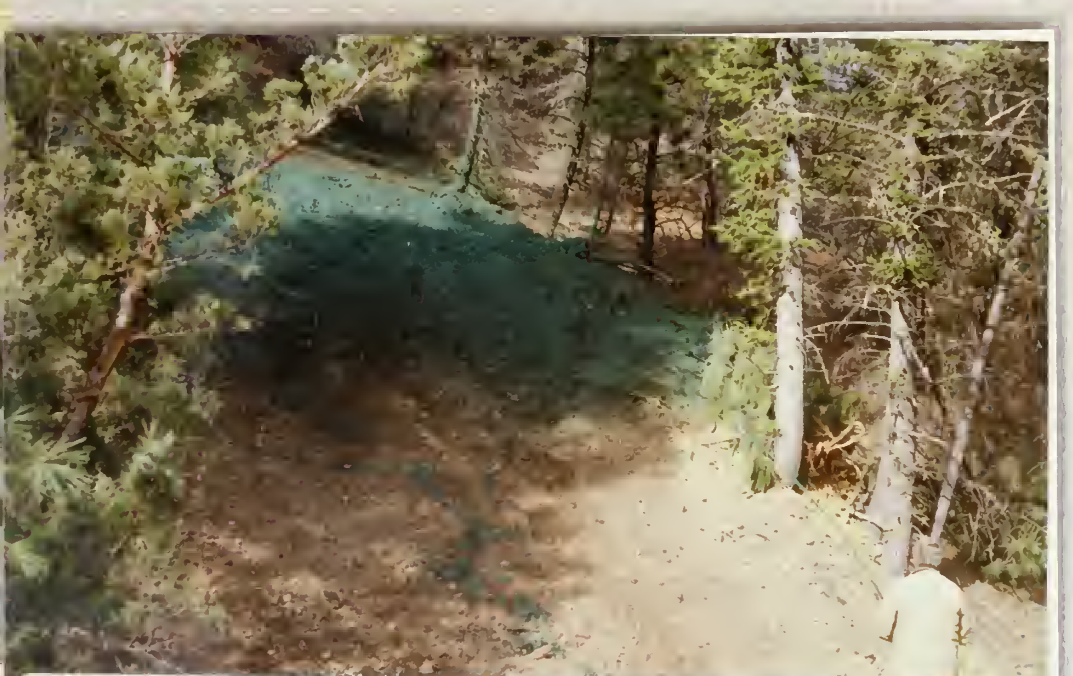

10/23/91 Straw mulching area below mill building site.

10/23/91 Coversoiled upper tailings pond prepared for seed, fertilizer and mulch.



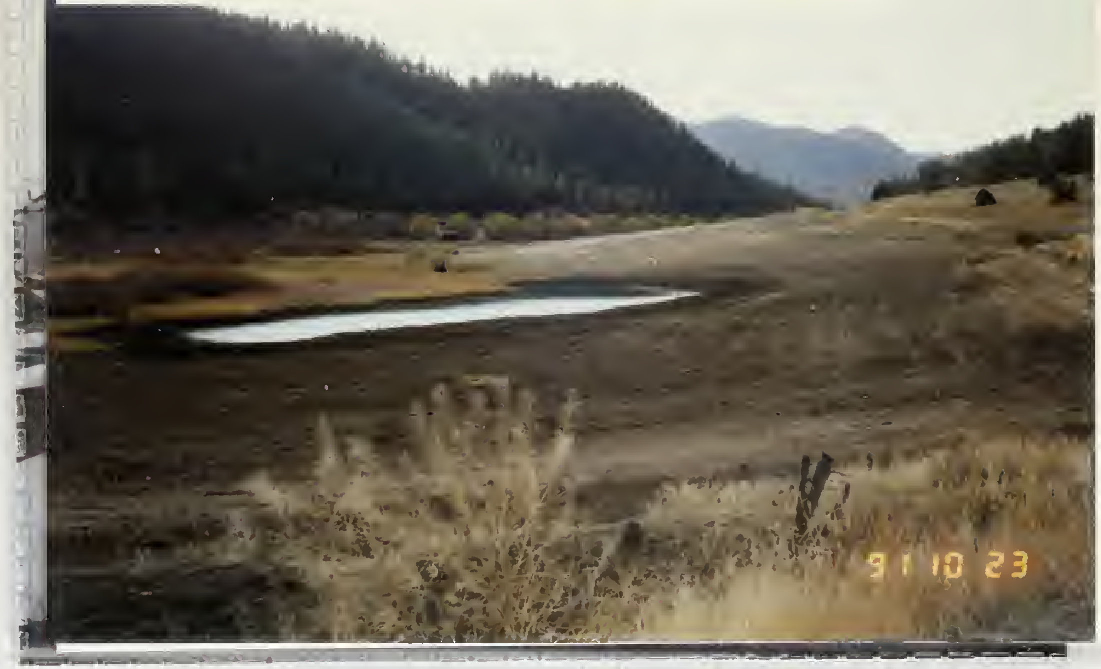
10/23/91 Crimping straw mulch adjacent to upper end of mat lined channel on upper tailings pond.

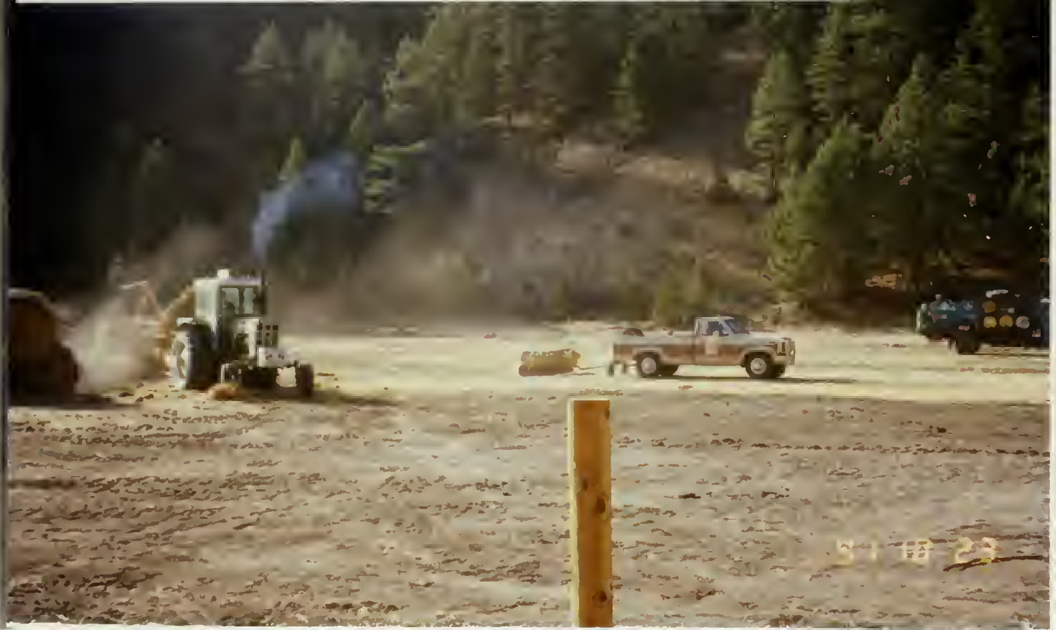


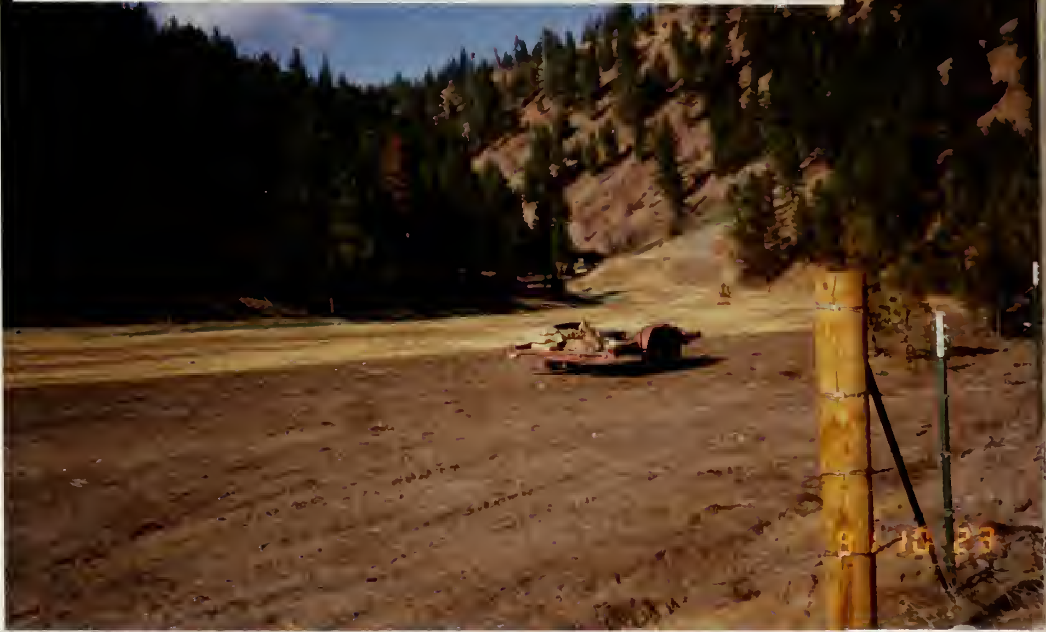


10/23/91 Hydromulching slope below adit #1.

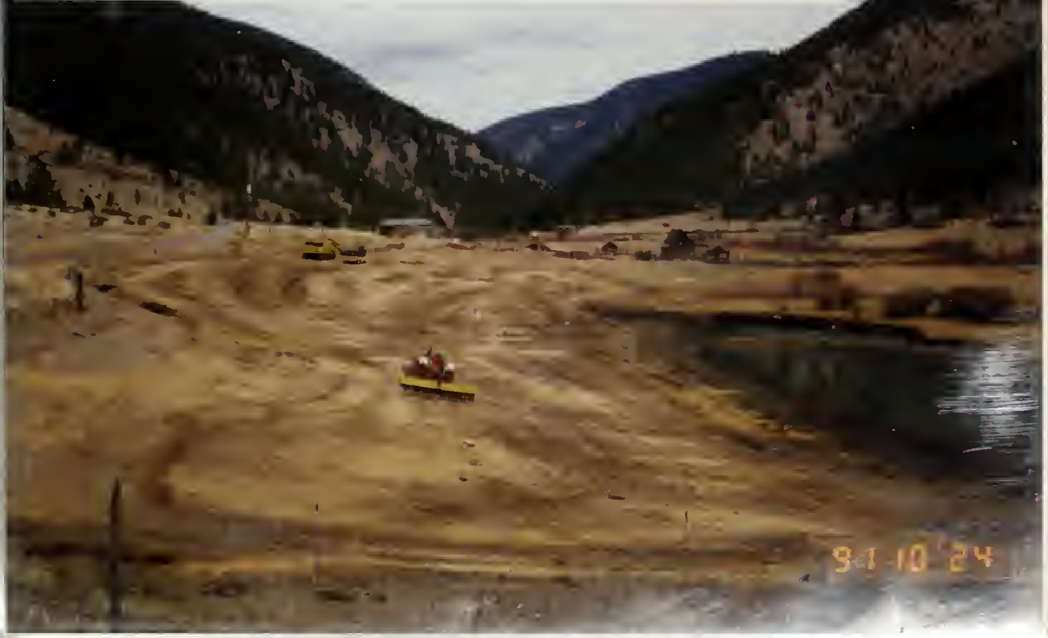
10/23/91 Prepared seedbed at coversoil borrow area.




10/23/91 Crimping straw mulch on upper tailings pond.

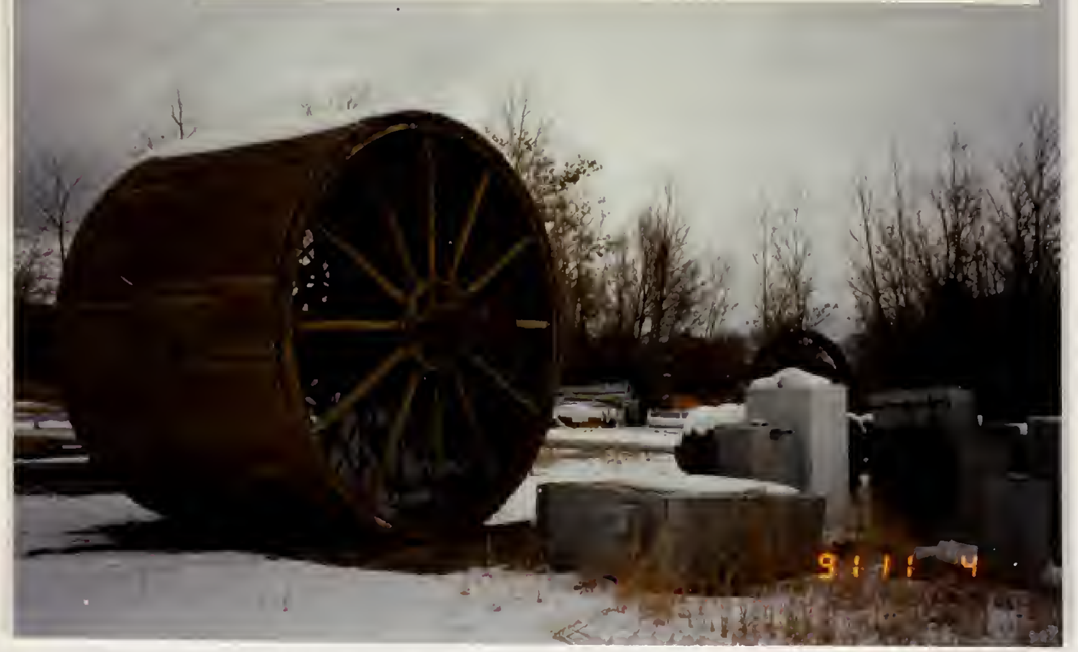

10/23/91 Upper tailings pond area partially straw mulched.

10/23/91 Hydromulching mill building site.


10/24/91 Crimping straw mulch at coversoil borrow area.

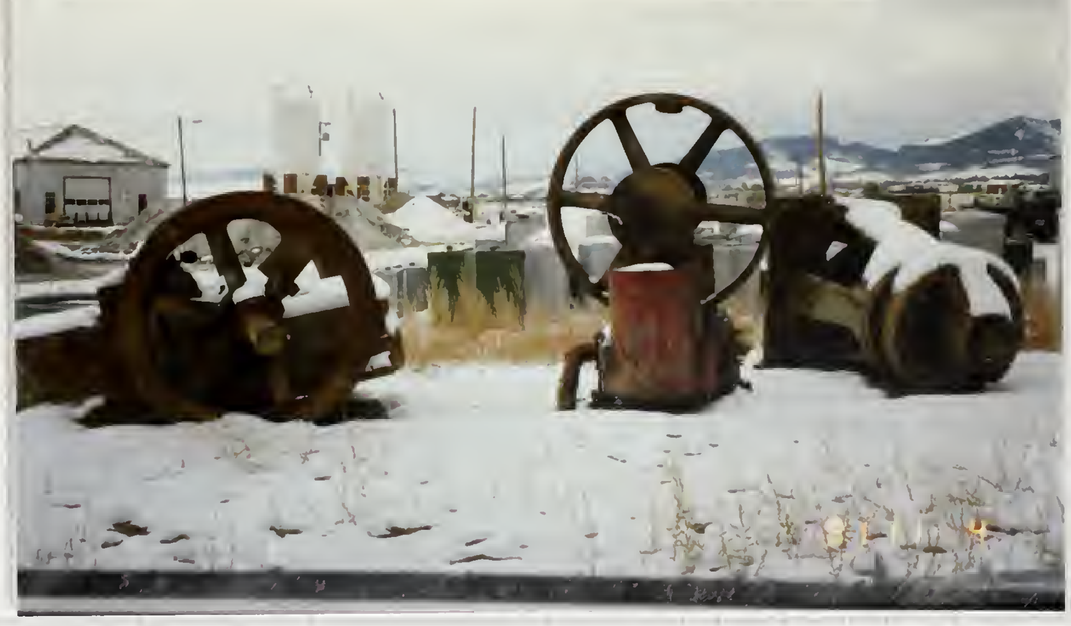
10/28/91 Fence and gate at upper tailings pond.

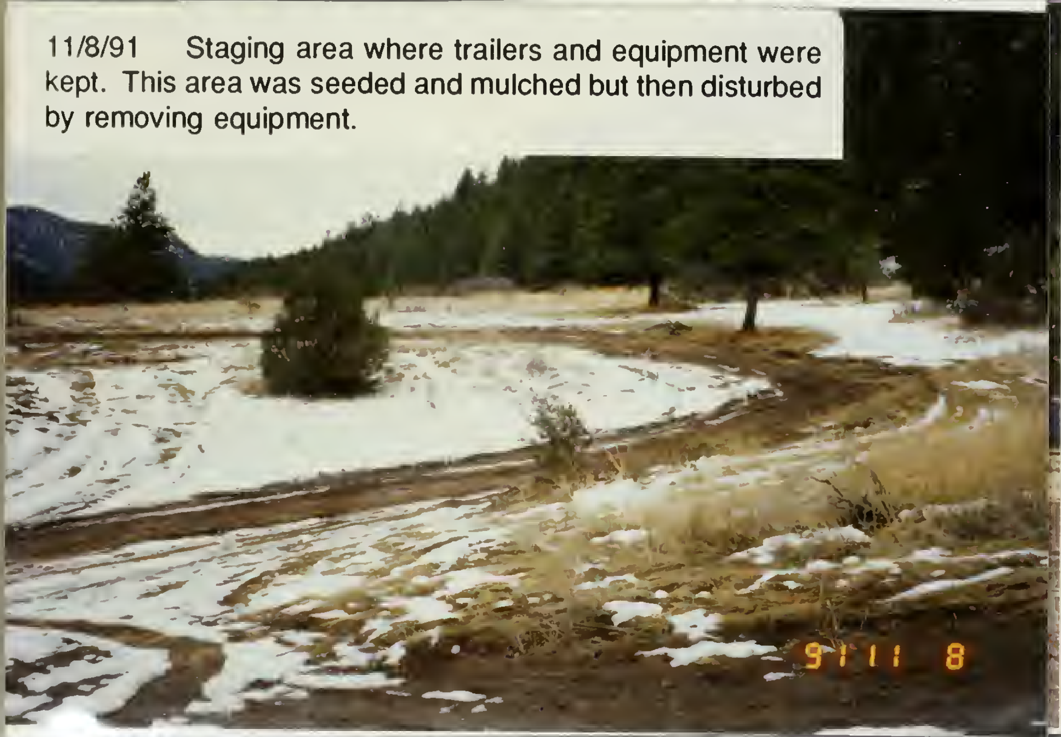
11/4/91 Small flotation separator stored at fairgrounds.



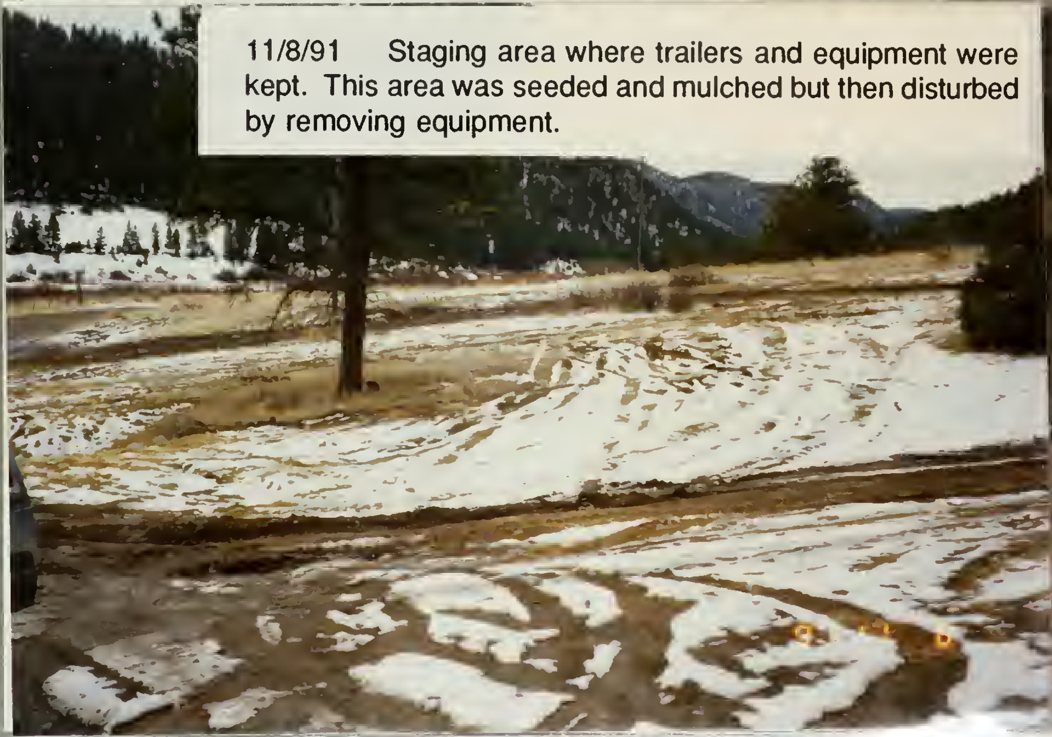
11/4/91 Timbers and small flotation separator stored at fairgrounds.

11/4/91 Cone crusher, jaw crusher and steam engine stored at fairgrounds.

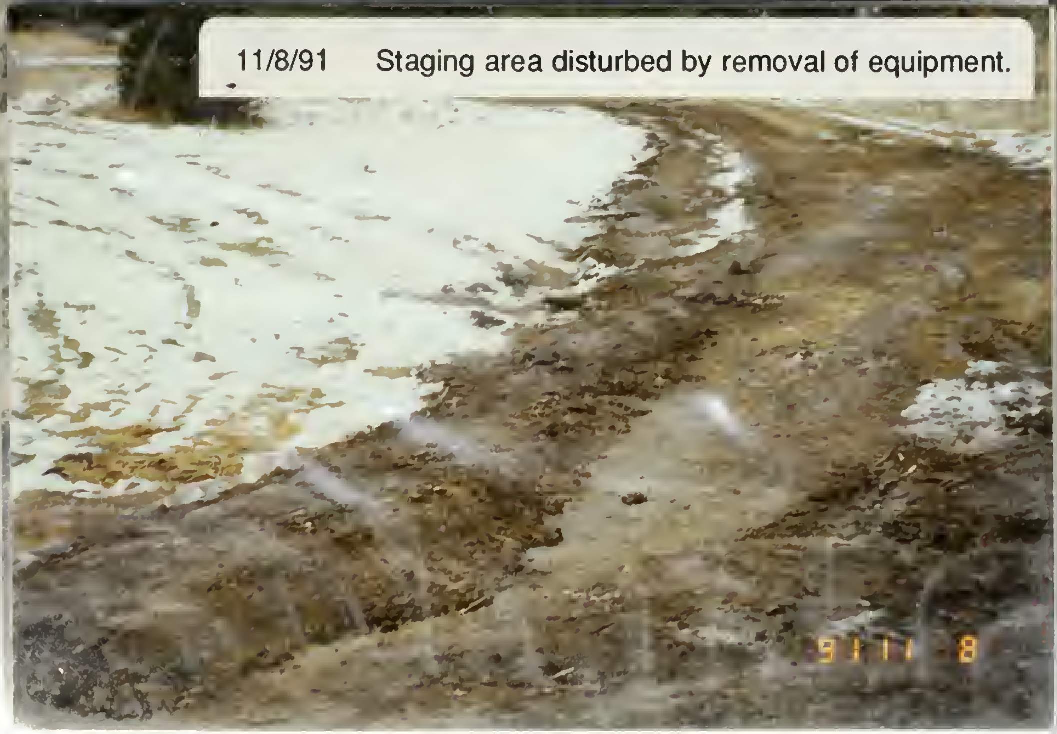




11/8/91 Staging area where trailers and equipment were kept. This area was seeded and mulched but then disturbed by removing equipment.



11/8/91 Staging area where trailers and equipment were kept. This area was seeded and mulched but then disturbed by removing equipment.



11/8/91 Staging area disturbed by removal of equipment.

11/8/91 Staging area disturbed by removal of equipment.